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ORIGINAL PAPER

Traditional Healers and Mental Health in Nepal: A Scoping Review

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Abstract Despite extensive ethnographic and qualitative research on traditional healers in Nepal, the role of traditional healers in relation to mental health has not been synthesized. We focused on the following clinically based research question, "What are the processes by which Nepali traditional healers address mental well-being?" We adopted a scoping review methodology to maximize the available literature base and conducted a modified thematic analysis rooted in grounded theory, ethnography, and phenomenology. We searched five databases using terms related to traditional healers and mental health. We contacted key authors and reviewed references for additional literature. Our scoping review yielded 86 eligible studies, 65 of which relied solely on classical qualitative study designs. The

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reviewed literature suggests that traditional healers use a wide range of interventions that utilize magico-religious explanatory models to invoke symbolic transference, manipulation of local illness narratives, roles, and relationships, cognitive restructuring, meaning-making, and catharsis. Traditional healers' perceived impact appears greatest for mild to moderate forms of psychological distress. However, the methodological and sample heterogeneity preclude uniform conclusions about traditional healing. Further research should employ methods which are both empirically sound and culturally adapted to explore the role of traditional healers in mental health.

Keywords Religion · Psychotherapy · Spirituality · Traditional healer · Mental health

Introduction

Given increasing global recognition of the relationship between traditional healers and mental illness (Incayawar et al. 2009), Nortje et al. (2016) generated a systematic review on the relevant quantitative data with van der Watt et al. (2018) following up on the remaining qualitative literature. Their review suggested that traditional healers in low- and middle-income countries were perceived to effect the most change among those who suffered from less severe mental illness, expected positive change, and believed in the inherent meaning of their treatment. Because their review demonstrated a clear diversity in traditional healers and the cultures they practiced in, they concluded future studies should focus on the cultural specificity of traditional healing practices within individual nations using detailed, contextual data to facilitate more generalizable claims (Nortje et al. 2016; van der Watt et al. 2018).

There is a rich body of ethnographic and qualitative literature from Nepal on traditional healers, however, a cursory review may instead reveal an over-romanticized and arguably dismissive generalization of mysticism, neologisms, scientific jargon, and other paranormal, miraculous, or extraordinary claims (Krippner and Combs 2002; Castillo 2004; Sidky 2010). The potential for misunderstanding necessitates a further in-depth exploration of the total available literature, the term "traditional healers" and how traditional healers operate vis-à-vis mental health in Nepal. This is made especially true given their growing clinical significance.

Previous work has promoted traditional healers to the role of primary care providers or referral agents (Poudyal et al. 2003, 2005). However, if medical providers delegate traditional healers to function simply as primary care providers or referral agents to other primary care providers, or even to deliver simplified manualized psychotherapies, then they lose access to the traditional healer's unique ability to treat the patient's teleological needs. Consequently, medical providers might benefit from bearing in mind Nepal's diverse, specific, and idiosyncratic cosmologies of the mind, how they shape the work of local traditional healers, and how they could potentially shape the work of local medical providers.

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Recent work by Chase et al. (2018) took a "scoping review" approach to synthesizing 38 publications on culture and the mental health in Nepal. The purpose of a scoping review is to provide an overview of the existing evidence, regardless of quality (Arksey and O'Malley 2005; Levac, Colquhoun, and O'Brien 2010). The reviewed literature discussed how culture and indigenous knowledge, beliefs, and values shape and determine the symptom experience, expression, and help-seeking behaviors of those with mental illness. Chase et al. (2018) concluded by affirming the growing interest in culturally informed mental health research and encouraging its application within service design and capacity building.

Future researchers may take several approaches to this. For instance, given the traditional healer's potential and unique capacity to engage in this healing role, medical providers could allow traditional healers to practice their own theories and interventions, without feeling the need to fulfill a medical role sub-serving biomedicine and vice versa (Ventevogel 1996). Here, future medical providers could adopt a holistic bio-psycho-social and spiritual collaborative care model in which multi-disciplinary teams would meet the explanatory needs of opposing illness causality models. Traditional healers in these teams could cover issues which have no simple pharmacological or psychopathological answer, and yet still play a role in both symptoms and solutions. This idealistic approach draws from how biomedicine and traditional healing systems can principally learn from each other and both contain elements which the other lacks. Future medical providers, researchers and public health officials in Nepal could use this approach as a road map for bringing mental health resources to the underserved in a way that is neither invasive nor imperialistic, but rather empowering on a social, individual, and even spiritual level (Craig et al. 2010).

It is an ideal time to synthesize the relevant literature in Nepal. However, the traditional healing landscape is described through a heterogeneous and difficult to summarize literature base. To date, empirical research on the relationship between traditional healers and mental health has been quite scarce because of the unique challenges to the trial design, implementation, and evaluation of traditional healers (Nortje et al. 2016; van der Watt et al. 2018). To study a field where fidelity, adherence, and manualized care do not easily translate into ways of understanding traditional healing, many past researchers have instead turned to ethnographic, qualitative, and other social science methods with poor quality and low evidence levels per biomedical criteria, e.g., GRADE recommendations (Schünemann et al. 2013).

Thus, to synthesize the relevant literature base in Nepal including the qualitative work which might otherwise elude systematic review, we adopt the scoping review methodology. Future researchers who wish to study traditional healers and mental health in Nepal, along with its socio-cultural diversity and complexity, should consider this scoping review in tandem with the work of Chase et al. (2018) who just recently reviewed culture and mental health in Nepal.

For our scoping review, we will first discuss the general scope of the included literature, introduce relevant terminology, and identify key atheoretical healer interventions before progressing to theoretical mechanisms of healing. Then we will summarize our results within a pathways to care model.

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Methods

Setting and Context

Nepal is a complex hotspot for cultural and biological diversity, altogether composed of 125 castes/ethnic groups and 123 languages, a fact which can be explained through Nepal's intertwined nature between the borders of the Indian subcontinent and Tibet. And according to the 2011 National Population and Housing Census, 81% of the population follows Hinduism, 9% Buddhism, 4% Islam, 3% Kirat Mundhum (indigenous ethnic religion), 1% Christianity, and 1% other or no religion ("National Population and Housing Census 2011 (National Report)." Consequently, Nepal's ethnic, cultural, linguistic, and religious heterogeneity has made it hard to generalize all theories regarding self-hood, magico-religious thinking, and perceptions of traditional healers across the entire population (Regmi 1987).

However, accurate, reliable data on religion have historically dodged Nepal's census reports for several reasons. Strict classification systems fail to capture the syncretic nature with which mountain region Hinduism in Nepal has absorbed Buddhist tenets and vice versa. Furthermore, census enumerators have been known to incorrectly lump whole ethnicities and castes together while relying on rigid parameters to record religious preference. This has left many to claim "Hinduism" as their religion despite evidence to the contrary (Dahal 2003; Ghimire 2019).

More recently, rapid shifts in religious preference have turned measurements into a moving target. For instance, census data have seen a rising popularity in Buddhism and Kirati religions among the Magar, Tharu, Chepang, and Dalit ethnic/caste groups. In another example, Christianity has surged 225% between 1961 and 2001, especially among the Tamang and Chepang ethnic groups (Dahal 2003; Ghimire 2019).

In light of Nepal's diversity, much of the literature on traditional healers and mental well-being has focused on specific Nepali subpopulations. Consequently, we categorized findings in this review by accepted social, political, and geographic divisions within Nepal. Nepal has three main types of ecosystems that inform the types of populations, livelihoods, and political contexts. The northern part of the country is the Himalaya, characterized by high-altitude regions with mostly Tibeto–Burman language speaking populations, and with a greater concentration of Buddhism. The middle region of the country is known as the Middle Hills (Parbat). This region is lower altitude hills and mountains with populations speaking Nepali and practicing Hinduism, as well as middle-hill ethnic minority groups who may practice Hinduism or Buddhism. The southern part of the country is the plains region (Tarai) characterized by high agricultural production and populations of north Indian dissent typically speaking Indo-European languages related to Hindi. Here, Hinduism is the dominant religion, with small Muslim populations.

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Search Strategy

Because of the broad landscape of rich, ethnographic data regarding traditional healing in Nepal, we focused on the clinically based research question, "What are the processes by which Nepali traditional healers address mental well-being?" Thus, our review, while open to Nepal's cultural heterogeneity, does not seek to summarize every related aspect of it, neither does it summarize each and every traditional healer intervention outside of those papers which match our research question.

We used the Preferred Reporting Items for Systematic Review and Meta-analysis Extension for Scoping Reviews (PRISMA-ScR) (Fig. 1; Appendix A in Electronic Supplementary Material) (Tricco et al. 2018). We additionally registered our scoping review through the Open Science Framework (OSF) (osf.io/4ahuw).

We utilized broad search strategies to capture relevant idiomatic and ethnographic language that might escape a typical systematic review taxonomy. For example, we searched for "mental health" using informal language based on

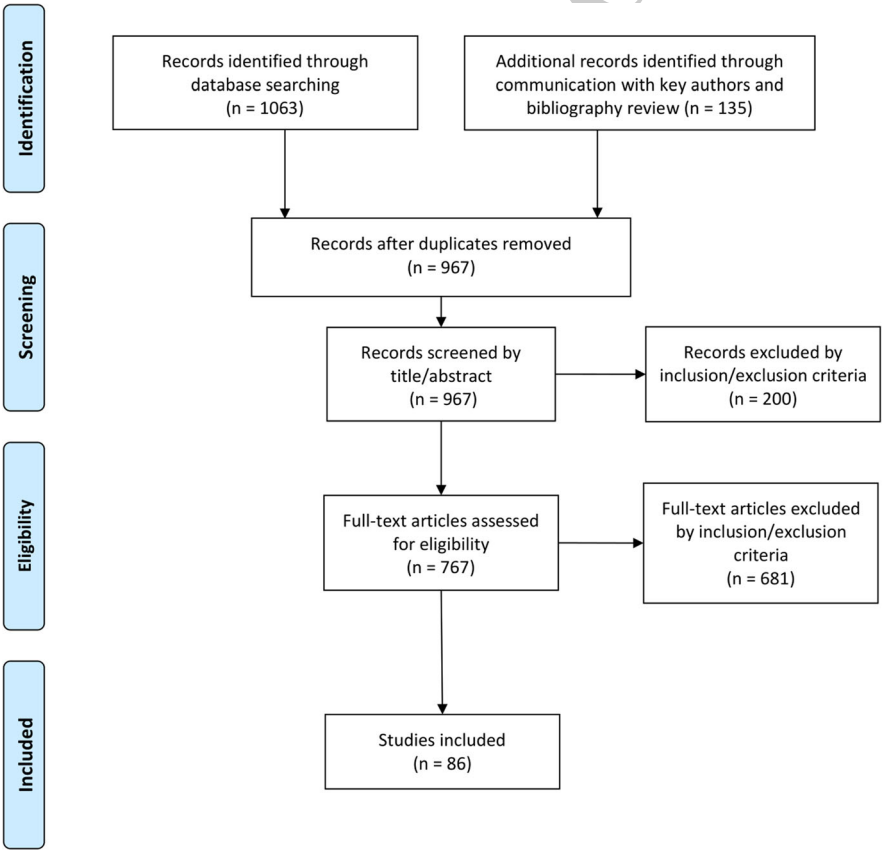

Fig. 1 PRISMA-ScR flow chart

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"mental well-being." We searched databases from Anthrosource, PsycINFO, Web of Science, Scopus, and Pubmed. The full search strings used varied based on each database (Appendix B in Electronic Supplementary Material). We contacted key authors and reviewed references of included articles and publications from their work for additional literature.

Screening and Eligibility Criteria

The authors screened the initial search results using pre-defined inclusion/exclusion criteria in two phases: (1) title/abstract review and (2) full-text review (Table 1). To avoid prior loose, unsystematic definitions, we used the same "traditional healer" definition as established by Nortje et al. (2016): "healers who explicitly appeal to spiritual, magical or religious explanations for disease and distress."

Data Extraction and Synthesis

We conducted our analyses according to guidelines for a modified thematic analysis rooted in grounded theory, ethnography, and phenomenology (Braun and Clarke 2006; Taylor and Bogdan 1998). This approach relied on identifying and describing explanatory patterns within texts and allowed for a more flexible account of the qualitative, heterogeneous body of literature.

Two of us (TVP and BNK) completed two passes of the literature to establish the final codes, themes, and organizational frameworks. Our first reading of the literature identified initial codes. We adjusted these codes through constant comparison across literature. To enhance trustworthiness of the qualitative analysis, we engaged in active discourse with respect to coding, organization of coding categories, and identification of emerging themes. We discussed the data and provided critical feedback on their interpretations. This provided a theoretical sounding board which allowed us to reflect on and then explore alternative interpretations before making changes.

Table 1 Inclusion/exclusion criteria

Inclusion criteria	Relates to traditional healers as defined by Nortje et al. (2016)
	Relates to psychological outcomes from any involved parties, regardless of concurrent physical outcomes
	Discusses the processes by which Nepali traditional healers address mental well-being
	Relates to Nepalis regardless of their physical location and includes non-Nepalis residing in Nepal
	Includes scientific data, regardless of its "quality" evaluation or study design
	Written in English
Exclusion criteria	Traditional healing not provided by a traditional healer as per the definition by Nortje et al. (2016)
	No reference to inclusion criteria outside of one passing sentence about the intersection between Nepali traditional healers and a psychological outcome

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By the end of our first pass, the codebook reached data saturation, i.e., no new themes emerged. We agreed upon the final codebook by reading the coded data and checking the codes for consistency (Appendix C in Electronic Supplementary Material).

Results

Altogether, our scoping review yielded 86 publications, including 65 qualitative studies, two quantitative studies, eight literature reviews, five perspective or opinion pieces, and six mixed methods studies (Table 2). Many were limited in scope; did not use regimented study designs, validated scales, or ratings for outcome assessments; relied primarily on ethnographic data without any biomedically defined framework; used terminology with ambiguous definitions inconsistent with the broader literature and health policies.

The reviewed literature spanned across most major regions of Nepal including the Kathmandu Valley (n = 15), Western Himalaya (n = 5), Central Himalaya (n = 18), Eastern Himalaya (16), Western Middle Hills (n = 6), Central Middle Hills (n = 4), Eastern Middle Hills (n = 4), Western Tarai (n = 4), Central Tarai (n = 8), Eastern Tarai (n = 1) as well as England (n = 3), Hong Kong (n = 1), and India (n = 3). Five works sampled from multiple regions. The reviewed literature also covered a broad range of ethnicities and castes including the lower castes (n = 6), higher castes (n = 10), Newar (n = 7), middle hills ethnic groups (n = 26), Tarai indigenous groups (n = 4), Kirati (n = 12), Chantel (n = 1), Sherpa (n = 8), Bhutanese (n = 3), Tibetan (n = 1), and Sikh (n = 1). 10 works represented multiple ethnicities or castes.

Despite such cultural heterogeneity in terms and constructs, much of mental health research and practice has described Nepal's fluid areas of self and life using a framework by Kohrt and Harper (2008). In this framework, they conceived of the Nepali self in terms of the *man* (heart-mind), *dimaag* (brain-mind), *iu/saarir* (physical body), *saato/atma* (spirit/soul), *ijjat* (social status/honor), and *samaaj* (social world). Nepali phenomenological concepts of the self, such as the *man* (heart-mind) notably bypass local notions of stigma classically associated with mental illness (Kohrt and Harper 2008). The distinction between *man* and *dimaag* (brain-mind) is especially important given that issues and solutions related to the *man* offer a satisfying explanation for sickness and misfortune, whereas *dimaag* issues and solutions face the same stigma as mental illness (Kohrt and Harper 2008). This nuanced stigma has presented tremendous barriers for healthcare delivery, and traditional healing is built upon this cultural psychology (ethnopsychology).

Overall, the literature reported on a wide variety of traditional healers in Nepal while simultaneously revealing that Nepali had no agreed upon general term for "traditional healer." The majority of the reviewed literature used local terms (emic) when referring to distinct ethnic and cultural types of traditional healers. These included but were not limited to *dhami* (mediums or villagers like any other who indirectly heal through divine possession states; conventionally used in Western Nepal), *jhankri* (non-mediums who directly heal through their own powers with or

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Table 2 Summary of reviewed literature

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Case study	Central Himalaya	Alter (2014)	1 IDI	NS	Healer with spirit possession and alcohol dependence	Biosemiotics as a way to understand healing and recovery from addiction
Case study	England	Jolly (1999)	1 IDI	NS	Gurkha Soldier	Soldier with odd behavior and physical symptoms
Case study	England (British Military Hospital)	Melia and Mumford (1987)	4 IDIs	NS	Patients admitted who were first considered to have physical disease	Witchcraft, spirit possession, psychiatric disease, and *dhami-jhankri* referrals
Case study	Kathmandu Valley (Bhaktapur)	Katry (2011)	2 IDIs	NS	THs	Agreement between healer and patient to do away with destructive supernatural forces
Case study	Kathmandu Valley (Boudhanath, Kathmandu)	Mastromattei (1995)	1 IDI	Middle Hills Ethnic Group (Tamang)	1 female *bombo*	Ecstatic ritual as familial closure for suicide and accidental death
Case study	Mixed (Kathmandu Valley (Kathmandu), Eastern Tarai (Saptari District), Central Tarai (Rupandehi District))	Acharya (2019)	3 IDIs	NS	*Dhami-jhankri* and *mata*	Positive psychological impact on psychosomatic patients
Cross-sectional	Central Tarai (10 VDCs, Chitwan District)	Luitel et al. (2017)	1983 surveys	NS	Adults	Treatment gaps in mental illness

Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Cross-sectional	Eastern Himalaya (Bhutanese refugee camps)	van Ommeren et al. (2004)	1052 surveys	Bhutanese	Tortured and non-tortured adults	THs and psychopathologies treated
Cross-sectional	Kathmandu Valley (Norvic International Hospital)	Hashimoto et al. (2015)	50 IDIs	NS	Patients with mental illness	Role of THs in referral to mental health care
Cross-sectional	Kathmandu Valley (urban Kathmandu and nearby villages)	Furr (2004)	276 surveys	NS	Teachers	Impact of westernization on deviant behavior
Ethnography	Central Himalaya (Helambu region)	Desjarlais (1991)	NS	Sherpa (Yolmo)	NS	Dreams as a vehicle for reporting mental distress
Ethnography	Central Himalaya (Helambu region)	Desjarlais (1992)	NS	Sherpa (Yolmo)	NS	THs and mental health
Ethnography	Central Himalaya (Dhading District)	Höfer (1981)	NS	Middle hills ethnic group (Tamang)	NS	Buddhist ritual techniques which interrelate the patient's physical and metaphysical worlds
Ethnography	Central Himalaya (Dhading District)	Höfer (1981)	NS	Middle hills ethnic group (Tamang)	NS	Buddhist ritual techniques which interrelate the patient's physical and metaphysical worlds

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Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Central Himalaya (Dhading District)	Höfer (1992)	NS	Middle hills ethnic group (Tamang)	NS	Informative diagnosis and ecstatic ritual as meaningful and self-distancing therapy catharsis
Ethnography	Central Himalaya (Dhading District)	Höfer (1994)	NS	Middle hills ethnic group (Tamang)	NS	Buddhist ritual techniques which interrelate the patient's physical and metaphysical worlds
Ethnography	Central Himalaya (Annapurna massif)	Messerschmidt (1976)	NS	Middle hills ethnic group (Gurung)	NS	Religious traditions as a way to rationalize the world
Ethnography	Central Himalaya	Michl (1976)	NS	Mixed (Chantel, lower caste (Kami))	NS	TH's ability to strengthen community's psychological adaptation to harsh environments
Ethnography	Central Himalaya (Annapurna and Dhaulagiri massifs)	Regmi (1987)	45 IDIs	Middle hills ethnic group (Gurung)	Local *lama* and community members	Myth and ritual for personality characterization
Ethnography	Central Himalaya (Jiri Valley, Dolakha District)	Sidky et al. (2000)	NS	Mixed (Sherpa, middle hills ethnic groups (Jirel, Tamang)	2 Sherpa *dhami-jhankri*, 1 Tamang *dhami-jhankri*, and several Jiral *phombo*	Role of *phombo* (Jirel THs)

Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Central Middle Hills (Khiji, Likhu Khola tributary east bank)	Egli (2014)	NS	Kirati (Sunuwar)	NS	Ritual ancestral atmosphere as a domination-free discussion and mediation
Ethnography	Central Middle Hills (Trisuli Bazar, Nuwakot District)	Höfer and Shrestha (1973)	NS	Higher caste (Brahman)	NS	Elder's presence and active patient participation during séance to create Brahmanical kinship
Ethnography	Central Tarai (Dhanusa District, Tisiyahi Village. Tisiyahi Clinic)	Burghart (1984)	NS	Tarai indigenous group (Maithil)	Brahmanically and medically influenced exorcist and his patients	Legitimizing folk explanatory paradigms through Brahmanical and medical influence
Ethnography	Central Tarai (Makwanpur District)	Riboli (2000)	NS	Middle hills ethnic group (Chepang)	NS	Healer as therapist and psychopomp who conducts puja to renew motivation and vigor
Ethnography	Central Tarai (Makwanpur District)	Riboli (2012)	NS	Middle hills ethnic group (Chepang)	NS	Consciousness and associated healing systems
Ethnography	Eastern Himalaya	Desjarlais (2003)	NS	Sherpa (Yolmo)	NS	*Bombo* rituals and psychological change

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Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Eastern Himalaya (Bala Village)	Gaenszle (2016)	1 observation	Kirati (Mewahang Rai)	TH and his patients	TH's speech acts to convey complex agency within a psychological framework
Ethnography	Eastern Himalaya (Eastern Arun Valley)	Hardman (1996)	NS	Kirati (Lohorung)	NS	The priest's use of *saya* as a complex symbolic code
Ethnography	Eastern Himalaya (Eastern Arun Valley)	Hardman (2004)	NS	Kirati (Lohorung)	NS	The relationship between emotions and ancestors
Ethnography	Eastern Himalaya	S. Jones (1976)	NS	Kirati (Limbu)	NS	Social determinants of spirit possession
Ethnography	Eastern Himalaya (Dolakha District)	Miller (1979)	NS	Middle hills ethnic group (Thami)	NS	Creating the expectation of improvement and naming the underlying spiritual illness to relieve tension and psychosomatic illness.
Ethnography	Eastern Himalaya (remote Hongu river watershed, south of Mount Everest)	Nicoletti (2006)	NS	Kirati (Kulunge Rai)	NS	Creating order and meaning through ritual
Ethnography	Eastern Himalaya (Shorung region, Solukhumbu District)	Paul (1976)	NS	Sherpa	NS	TH's control of madness

Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Eastern Himalaya (Bhojpur Bazaar)	Pigg (1995)	NS	NS	NS	The overlap between healer therapeutic aspect and the social dynamics they produce, deliver, and sustain
Ethnography	Eastern Himalaya (Mewakhola area, Limbuan)	Sagant (1976)	NS	Kirati (Limbu)	NS	TH's initiation and sacrificial rituals
Ethnography	Eastern Himalaya (Solukhumbu District)	Soubrouillard (1995)	5 IDIs	Mixed (Tibetan, Nepali)	2 females and 3 male THs	Treatment of mental illness by THs
Ethnography	Eastern Himalaya (Solukhumbu District)	Walter (2001)	NS	Higher caste (Chetri, Brahman), Lower caste (Kami, Damai) Kirati (Rai), Middle hills ethnic group (Tamang), Sherpa	NS	Rites which bind various communities into a broad network of shared commonalities and experience
Ethnography	Eastern Middle Hills (outpatient neurology/ medicine, tertiary care center)	Bajaj et al. (2013)	100 IDIs	NS	Patients with neurological disorders	Psychosocial relationships to neurological disease
Ethnography	Eastern Middle Hills (Bhutanese refugee camp)	Chase and Sapkota (2017)	NS	Bhutanese	Refugees	Spiritual care of Bhutanese refugee distress
Ethnography	Eastern Middle Hills (village near the Tamba and Mauling Rivers)	Fournier (1976)	NS	Kirati (Sunuwar)	NS	Spirit possession and the sacrificial performances by THs

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Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Eastern Middle Hills (Terhathum District)	R. Jones (1976)	NS	Kirati (Limbu)	NS	Roles of psychiatrists, THs, and priests
Ethnography	India (Darjeeling Hills of West Bengal and Sikkim)	Hyam (2019)	NS	Kirati (Limbu, Rai), Middle hills ethnic group (Gurung, Tamang), Newar	Villagers, THs, and Bauls (mystic minstrels)	Music which engenders body–self-integration, sociopolitical subversion, and psychophysiological healing.
Ethnography	India (Eastern Kumaon, former kingdom of Askot)	Lecomte-Tilouine (2009a, b)	NS	NS	NS	Rituals which seek help, confront grievances, and bring communal disputes into public space of gods' arbitration
Ethnography	India (Kalimpong Sub-district, Darjeeling, West Bengal)	Macdonald (1976)	NS	NS	Nepali immigrant population	The sociological and psychological roles of *dhami-jhankri*
Ethnography	Kathmandu Valley (Kathmandu, Bhaktapur, and Patan, and the town of Banepa)	Greene (2002)	110 IDIs	Newar (Manandhar)	Some goldsmiths of the Shakya and Vajracharya Buddhist castes, farmers, monks, priests.	Buddhist buffalo horns which reconceptualize the body and actualize beliefs about death and rebirth

Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Kathmandu Valley (northwest of Kathmandu, north of the Salankhu River, between the Trisuli and Ankhu rivers)	Holmberg (1989)	NS	Middle hills ethnic group (Tamang)	NS	TH's madness and healing rituals
Ethnography	Kathmandu Valley	Parish (1991)	NS	Newar	NS	Sacred and moral concepts of the Newar mind, self, and emotion
Ethnography	Kathmandu Valley (psychiatric outpatient clinic and healer village)	Skultans (1988)	NS	NS	Hospital patients consulting for mental illness and THs	A comparison of patients who are seen by THs versus those seen by medical hospitals
Ethnography	Kathmandu Valley (The Centre for Victims of Torture (CVICT))	Tol et al. (2005)	3 case studies	NS	Patients seen at CVICT	Culturally adapted psychosocial counseling
Ethnography	Mixed (Kathmandu Valley (mountains to the east and west), Central Tarai (recently settled southern areas))	Peters (2004)	NS	Middle hills ethnic group (Tamang)	TH guru	Phenomenology, mystical experience, and healing rituals of Tamang THs
Ethnography	Mixed (Kathmandu Valley (mountains to the east and west), Central Tarai (recently settled southern areas))	Peters (2007)	NS	Middle hills ethnic group (Tamang)	TH guru	Phenomenology, mystical experiences, and healing rituals of Tamang THs

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Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Mixed (Central and Eastern Himalaya (primarily the Dolakha and Sindhupalchowk Districts))	Shneiderman (2015)	NS	Middle Hills Ethnic Group (Thangmi)	NS	Origin myths, rituals, and mental well-being
Ethnography	Western Himalaya (Mustang District, Muktinath Valley)	Craig et al. (2010)	44 IDIs	Tibetan	*amchi* (practitioners of Tibetan medicine), *mopa* (diviners), *ngakpa* (tantric specialists)	Conceptions of known illness as a misalignment of local spiritual forces
Ethnography	Western Himalaya (southwestern foothills, Dhaulagiri massif)	Hitchcock (1973)	NS	Middle hills ethnic group (Bhujel)	NS	Séances which answer bothersome questions, mirror ambiguity, and allow expression of deeply seated sexual anxieties
Ethnography	Western Himalaya (southwestern foothills, Dhaulagiri massif)	Hitchcock (1976)	NS	Middle hills ethnic group (Bhujel)	NS	TH séances to overcome grief
Ethnography	Western Himalaya (Gyasumdo region, northern village of Tshap)	Mumford (1989)	NS	Middle hills ethnic group (Guring}	NS	Tibetan rituals which ensure happiness and general well-being
Ethnography	Western Himalaya	Winkler (1976)	6 IDIs	4 higher caste (Chhetri, Brahman), 2 lower caste	6 *dhami-jhankri*	Social contexts of the *dhami-jhankri*

Table 2 continued

Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Ethnography	Western Middle Hills (Lamjung District)	van Leeuwen (2008)	26 IDIs, 5 FGDs	Mixed (Newar, middle hills ethnic group (Gurung), higher caste (Chetri), lower caste (Dhalit))	20 THs (ages 45–80 years, 9 trained in psychosocial counseling), 3 local psychosocial workers, 1 head nurse, 2 doctors	The role of THs in psychosocial counseling
Ethnography	Western Middle Hills (Jajarkot and Rukum Districts)	Maskarinec (1995)	NS	NS	NS	Relations among language, action, and social realities
Ethnography	Western Tarai	Reinhard (1976)	NS	NS	Purbia Raji speaking hunter-gatherer communities	Effects of TH personality
Ethnography	Western Tarai (drainage basins of the Karnali and Mahakali rivers)	Gaborieau (1976)	NS	NS	NS	Personalities of THs and gods
Ethnography	Western Tarai (Palpa District)	Harper (2014)	4 IDIs	NS	1 lama, otherwise NS	Idioms of distress and the phenomena of multiple physical complaints
Ethnography	Western Tarai (remote region)	Kohrt and Schreiber (1999)	52 IDIs	Tarai Indigenous Group (Tharu)	Villagers	Neuropsychiatric complaints of *jhum-jhum*
Grounded theory	Central Tarai (Chitwan District)	Brenman et al. (2014)	83 (33 KIIs and 9 FGDs)	NS	Community members and health facility/organization workers	The relationship between traditional and biomedical sources

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Grounded theory	Central Tarai (Dhanusha District)	Clarke et al. (2014)	22 IDIs and 12 FGDs	NS	IDIs with distressed mothers and a *dhami-jhankri*; FGDs with community members	Treatment of maternal tension by *dhami-jhankri*
Grounded theory	Kathmandu Valley	Kohrt and Hruschka (2010)	33 free-listing/ emotion mapping activity; 32 IDIs	Mixed (Bhutanese, Newar, middle hills ethnic groups (Gurung, Magar), Kirati (Rai))	One male NGO psychosocial counselor	Expression of psychological trauma
Grounded theory	Western Middle Hills (Pyuthan District)	Kisa et al. (2016)	26 KIIs and 9 FGDs	NS	NS	Reducing the mental health accessibility gap
Literature review	Mixed (Central Himalaya (mostly Dolokha District), Central Middle Hills (Kavrepalanchok district), and Central Tarai (Chitwan District))	Sidky (2008)	NS	Mixed (middle hills ethnic groups (Jiral, Gurung, Tamang), higher caste (Chhetri), Kirati (Rai), Sherpa)	NS	Overview of THs
Literature review	NS	Kuruvilla and Jacob (2015)	NS	NS	NS	Referral networks between THs and the primary health care system

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Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Literature review	NS	Busick (1978)	NS	NS	NS	Promoting social integration and community solidarity through reinforcement of religious reality
Literature review	NS	Evers et al. (2016)	NS	NS	NS	THs versus the biomedical approach to childhood trauma
Literature Review	NS	Gewali (2008)	NS	NS	NS	Traditional medicine and medicinal plant resources
Literature review	NS	Kohrt and Harper (2008)	NS	NS	NS	Mind-body relations, mental health, and provider preferences
Literature review	NS	Sidky (2010)	NS	NS	NS	THs, human religiosity, and neurotheology
Literature review	NS	Lecomte-Tilouine (2009a, b)	NS	NS	NS	Rituals which may answer distress related to the social order
Mixed methods	Central Himalaya (Thumpakhar and Thulopakhar VDCs, Sindhupalchowk District)	Lohani (2010)	81 surveys; # NS for IDIs, KIIs, and FGD	Middle hills ethnic group (Tamang)	Surveys targeted the head of the household	Tamang–animal relationships

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Mixed methods	Central Himalaya (Sangachowk VDC, Sindhupalchowk District)	Sapkota et al. (2014)	38 case–control participants, 7 IDIs, 3 FGDs	Mixed (lower caste (Dalit), higher caste (Giri, Brahman))	Possessed and non-possessed women, school teachers, a NGO worker, family members, and a Hindu priest	Cultural contexts and psychosocial correlates of spirit possession
Mixed methods	Central Middle Hills	Kohrt et al. (2020)	84 IDIs, 4 observational rating scales	Mixed (higher caste (Brahman , Chetri), Newar, lower caste (Badhai, Dalit), indigenous Terai group (Yadab), middle hills ethnic group (Tamang), Sherpa (Lama), Sikh)	Mixed religions (Hindu, Buddhist, Muslim, Satsai), IDIs with patients, THs, observational rating scales on *dhami-jhankri*, *jyotisi* (astrologers)	Common and specific factors shared between THs and conventional psychotherapy
Mixed methods	Kathmandu Valley	Kohrt (2014)	142 surveys, 24 case studies, 152 KIIs, 25 FGDs	NS	KIIs/FGDs with children and community members; case studies with child soldiers	Rituals used during the reintegration of child soldiers following the Maoist Insurgency
Mixed methods	Western Middle Hills (Jajarkot District, Kadi)	Subba (2007)	# NS for surveys, case studies, IDIs, and FGDs	Higher caste (Thakuri, Chhetri)	Household heads, THs, patients	Kadi recitals, cultural logic, and psychosocial distress

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Design	Study location/setting	Study	Sample size	Ethnicity/caste	Other sample characteristics	Relevant topics
Mixed methods	Mixed (Western Middle Hills (Syangja District, Mahendranagar municipality), Central Himalaya (Charikot municipality), Eastern Himalaya (Ilam municipality))	Shrestha and Lediard (1980)	99 interviews/surveys	Mixed (higher caste (Brahman, Chhetri, Thakuri), Newar , lower caste (Kami, Sarki), Middle hills ethnic groups (Gurung, Magar, Tamang, Thami), Tarai Indigenous Group (Tharu))	NS	THs as therapeutic leaders of syncretic religious background who connect with spiritual struggle for better life
Opinion	Eastern Himalaya (Arun Valley)	Hyman (2006)	NS	Mixed (Higher caste (Chhetri), Kirati (Rai), Middle Hills Ethnic Group (Gurung), Tibetan)	NS	TH impact on village well-being
Opinion	Kathmandu Valley	Gellner (1994)	NS	NS	NS	Mediums, spirits, psychosocial issues, and blood sacrifices
Opinion	NS	Dickinson (1988)	NS	NS	NS	Special role of THs in treating psychiatric disease
Opinion	NS	Dickinson (1988)	NS	NS	NS	Special role of THs in treating psychiatric disease
Opinion	NS	Hitchcock (1976)	NS	NS	NS	THs in comparison to psychiatrists

NS not specified, *IID* in-depth Interview, *KII* key informant interview, *FGD* focus group discussion, *VDC* village development committee, *TH* traditional healer

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without divine possession states; conventionally used in Eastern Nepal) (Hitchcock 1976), *dhami-jhankri* (an unconventional though common amalgam of *dhami* and *jhankri*), *lama* (a Buddhist term for monk ritual practitioner which also refers to an informal traditional healer), *mata* (female healer, often referred to a woman who had become possessed by a spirit that in turn gave her healing powers), *ban jhankri* (jungle healer), *jyotishi* (astrologers who can heal patients), *mopa* (diviners), *ngags pa* (tantric priests), *baul* (mystic minstrels) (Hyam 2019), *amchi* (Tibetan doctors) (Craig et al. 2010), *bijuwa* (Rai traditional healer) (Hyam 2019), *bombo* (Tamang or Yolmo healer), *lambu* (Tamang healer) (Höfer 1997), *phombo* (Jirel traditional healer) (Sidky et al. 2000), *pande* (Chepang healer) (Riboli 2012), *puimbo* (Sunuwar healer), *ngiarni* (Sunuwar healer) (Fournier 1976), *poju* (Gurung healer), *hlewri* (Gurung healer) (Messerschmidt 1976), *gurau* (Tharu traditional healer) (Shrestha and Lediard 1980), and *yeba* (Limbu traditional healer) (S. Jones 1976). Others referred to less conventional healers such as a *punjari* (priests who specialize in puja rituals either at home or the temple, typically Hindu) (Hitchcock and Jones 1976; Sidky 2008). Curiously, *jajmani* (similar to *pujari*, however, *jajmani* were villagers like any other who happened to be performing in-home rituals including but not limited to puja) did not appear in the included literature.

Certain healer types, such as *ayurvedic* healers, *bhaidya* (healers in the *ayurveda* tradition, who typically prepared herbal medications), naturopathic healers (also similar to *ayurvedic* healers, but with an emphasis on vitalism), lhapa/lhamo (oracles), and *aaya* (ritual specialists who are often concerned with forms of mental distress and misfortune, as well as with other issues) also did not appear in the included literature. Although patients likely present to these healer types for ailments reminiscent of Western psychopathology, our review of the available literature base did not reveal explicit documentation of a ritualistic interaction with a psychological outcome in keeping with our inclusion/exclusion criteria.

The included literature used non-local (etic) terms such as "traditional healer," though less commonly than their emic counterparts. Other etic terms included "faith healer," "traditional faith healer," "traditional medical practitioner," "shaman," and "medium." The broad etic language had at times proven confusing as, for example, faith healers could also distinguish themselves from traditional healers through their emphasis on prayer or other faith-based practices.

In spite of the aforementioned clear boundaries across individual healer types and for the purposes of narrative simplicity within the broader context of patient–healer interventions, we will refer to all traditional healer types, whether faith healers, shamans, *dhami-jhankri*, etc., as "traditional healers" unless contextually necessary. We also refer to all those receiving the traditional healer's intervention as "patients" whether they be clients, villagers, community members, etc. while recognizing the biomedical connotations inherent within this term.

Diagnosis

Our review revealed many kinds of traditional healer diagnostic approaches often in the setting of but not specifically for mental health complaints. Diagnostic approaches included pulse checks, social interpretation, and magico-religious

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divination, recitals, and offerings. Interestingly, many traditional healers used techniques interchangeably, and patients demonstrated little interest in the traditional healer's actual diagnosis (Skultans 1988). Some diagnostic approaches blurred the line between diagnosis and treatment, as was the case with more elaborate performances and the involvement of social support (Maskarinec 1995; Sidky 2010; Sagant 1976; Brenman et al. 2014; Skultans 1988).

Traditional healers could divine the cause of illness by taking the patient's pulse, although with a less consistent approach when compared to the biomedical model (van Leeuwen 2008). If no pulse was in the right wrist, then no major deities could be said to be the cause. If there was no pulse in the left wrist, then an evil spirit or witch was thought to be at work. If there was a pulse on both wrists, then the cause was deemed natural (Maskarinec 1995; Soubrouillard 1995).

Traditional healers could diagnose between magico-religious and physical causes of illness using specific acts of divination. One common technique was known as *jokana,* of which there were several similar varieties. During the process of *jokana* the traditional healer would take a few pieces of rice from a small pile on a plate, name a general magico-religious category of illness, and then determine the stated category's presence based on the pattern of rice as the traditional healer separated them. In theory, the traditional healer would perform this lengthy process each time. In reality, the traditional healer shortcuted this time consuming process and performed what the traditional healer found intuitively true (Reinhard 1976).

Traditional healers could diagnose through elaborate performances. During these performances, traditional healers could offer animals, food, or other items to the gods or ancestors to receive an answer about the patient's illness (Sagant 1976; Brenman et al. 2014). Other times, traditional healers could perform recitals adopted from traditional healer texts and/or other technical maps with fixed cosmologies about Nepali self-hood and culture (Soubrouillard 1995). For example, traditional healers could recite historical tales about local spirits before exhorting them to leave the afflicted humans alone and to return to the wilderness where they belonged. While these narrative recitals aimed to identify a singular spirit, sometimes singling out just one was not possible, and in these cases, the traditional healer would have to appease each offending spirit (Maskarinec 1995; Sidky 2008).

Some urban traditional healers involved the patient's friends and family for diagnostic interpretation. As a result, those involved made the diagnostic and curative events clearer through personal elaboration of the traditional healer's original findings (Maskarinec 1995; Skultans 1988). In rural settings, where close ones can form a constant backdrop to the patient's life, no particular emphasis was placed on outsider attendance.

Treatment

Our review revealed a wide range of traditional healer treatment styles including traditional healer and/or patient altered states of consciousness, spoken rituals, and non-spoken rituals. Some treatments overlapped with diagnostic approaches. While traditional healers applied their treatments broadly across different disease states, many specifically reserved altered states of consciousness and non-spoken rituals

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specifically for considerable mental distress (Hitchcock and Jones 1976; Regmi 1987; Skultans 1988; Desjarlais 1992; Soubrouillard 1995; Hardman 1996; Peters 2007; Subba 2007; Sidky 2010).

Relevant to the traditional healer's ability to treat mental distress, traditional healers have been the center of debate with regard to their own possible psychopathology (Paul 1976). Traditional healers generally would undergo an initiation process during which they therapeutically transformed from possible psychosis to a more organized and integrated social identity. Afterwards, they would willfully enter in and out of controlled altered states of consciousness, sometimes referred to as an ecstatic state, distinguish between ordinary and non-ordinary realities, and deliberately engage in meaningful conversation about the cosmology of society (Sidky 2008).

For patients, each individual would first deeply concentrate through drugs, sweat lodges, vision quests, breathing exercises, percussion instruments, or complex meditation and imagery exercises. Ego boundaries would then dissolve leading to the psychological and sometimes terrifying annihilation of the self. Eventually, the patient would develop a collaborative relationship between their revealed unconscious and conscious selves (van Leeuwen 2008; Peters 2004).

Traditional healers, both well- or ill-intentioned, delivered *mantra* (spoken prayer, hymns, or chanting) or *tantra* (bodies of text or schools of thought or sometimes a meaningless term spoken with *manntra*) to either heal clients or harm others (Soubrouillard 1995). For example, *mantra* and *tantra* could raise the *saya* (soul) in people whose *saya* has fallen, correct the ancestor–person relationship, treat ambiguous and confusing physical and psychosocial distress, or help a family overcome grief over a child's unexpected death (Hardman 2004; Subba 2007). However, *mantra* and *tantra* faced certain limitations. For example, while traditional healers insisted that they could control all major spirits using *mantra* and *tantra*, they could not control spirits that caused madness (Sidky 2008).

Traditional healers could use materials and visualizations that accompanied their *mantra* to guide and organize the body. For instance, the traditional healer could bring up a *mantra* and illustration specifically to tackle madness or to do away with minor malevolent spirits caused by their close physical proximity. Other techniques included offering patients protective amulets to reduce the fear surrounding illness (van Leeuwen 2008), performing *phukne* (blowing an evil spirit away), playing the *dhangro* (drum), and adorning and/or employing traditional items such as a *rudraksha mala* (garland), *ghanti bhayako mala* (other type of garland), *dumsi kanda* (a special cap with a porcupine quill), and *mayurko pwankh* (peacock feather) (Jimba et al. 2005).

Traditional healers could perform elaborate sacrificial ceremonies in the name of a greater cosmological force to not only diagnose but to treat illness. Traditional healers, during multiple accounts, helped patients to overcome suffering, enhance cultural human–animal relationships, prevent the occurrence of future traumatic events, treat feelings of a sinful past life, disharmony, or *bhootvidya* (psychiatric conditions caused by gods, goddesses, demons, witches, and astrology), and feel assured of their child's safe return to or welcome from the Maoist Insurgency, a civil war which raged from 1996 to 2006 through the countryside with death

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sentences, murders, purges, abductions, and other war crimes against humanity (R. L. Jones 1976; Fournier 1976; Sidky et al. 2000; Peters 2007; Gewali 2008; Lohani 2010; Kohrt 2014).

Traditional healers and patients considered beatings particularly effective against illnesses of unknown etiology given the presumption that such ailments and their associated beatings both affected the whole individual (Winkler 1976; Gewali 2008). Discouragingly, violence, high drama, and a focus on the visceral reactions of bulging eyes, popping veins, and emesis at times resulted in considerable bodily harm. Some *dhami-jhankri* went as far as threatening, suffocating (e.g., with water), beating, or applying a red-hot iron to patients (Jimba et al. 2005; van Leeuwen 2008; Alter 2014). Worse still, healer rituals, while viewed as a culturally appropriate form of divine justice among humans, could instead reinforce oppressive power structures and human injustices against disenfranchised populations such as women rather than alleviating distress or innovating social order (Lecomte-Tilouine 2009b).

Theoretical Mechanisms of Healing

Our review revealed several theoretical mechanisms which sought to explain why patients perceive positive benefit from traditional healers. We categorized these mechanisms as traditional healing through crafting a symbolic spiritual narrative, providing personal comfort, mobilizing social support, inducing an altered state of consciousness, or facilitating spontaneous recovery.

The traditional healer in essence embraces the human need to connect with a symbolic life and spiritual explanation for misfortune. The traditional healer crafts the symbolic life within a culturally relevant narrative for the self and names and makes known visible unknown agents of affliction. In contrast to conventional psychotherapy, the traditional healer alters and manipulates the patient's innately lived human experience, subjective socio-cultural environment, and perceptual logic using myths and magico-religious symbols. Compared to biomedical explanatory paradigms, whose causal hypotheses can prove considerably abstract and counter-intuitive, the metaphors from traditional healers, long since embedded within Nepal's cultural and socio-political psyche, are more popular, acceptable, and culturally logical. This allows for a form of therapy which is less explicit, more comprehensible, and emotionally palatable (Soubrouillard 1995; Craig et al. 2010; Alter 2014).

Traditional healers can even vary the prominence and dramatic effect of their spiritual metaphors through the degree to which they act out magicio-religious strength. For instance, traditional healers can perform visceral rituals while paying tedious attention to their procedure and craftsmanship of ritual and alter paraphernalia (Nicoletti 2006). By demonstrating their healing powers through psychodrama, traditional healers separate themselves from priests, who focus on the life cycle, planting, harvesting, and temple worship, and doctors, who practice professionalism (S. K. Jones 1976).

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Once the traditional healer activates locally relevant magico-religious symbols, they then remedy the mind by phenomenologically reorienting a patient's experiential reality to permit the free expression of mental illness without the reductionist vocabulary constraints of western psychiatry (Alter 2014; Brenman et al. 2014). This phenomenological reorientation, sometimes dubbed as the heart-mind solution, can occur in the following sequence: 1) illness narrative (2) physiological experience, and then (3) communication (Kohrt and Harper 2008). Here, the patient will present to traditional healers not for mental health treatment but for issues with ghosts, spirits, gods, or witches, after which the traditional healer, as both a spiritual and community leader, establishes a consensus to hand responsibility of sickness and misfortune to higher magico-religious beings (van Leeuwen 2008).

Whether granting good luck or facilitating the free expression of anger, traditional healers can craft rationalizations for patients when they are confounded by issues related to illness, identity, and actions, the seemingly impossible, Nepal's storm afflicted, harsh environment, and so forth (Hitchcock and Jones 1976; Messerschmidt 1976; Reinhard 1976; Regmi 1987; Skultans 1988; Desjarlais 1992; Maskarinec 1995; Subba 2007; Kohrt and Harper 2008; van Leeuwen 2008). For mundane quarrels between individuals or groups, traditional healers can attempt to depersonalize the conflict and impersonally blame it on spirits as much as possible (Michl 1976). In another example, the patient may suffer from a seemingly unremitting illness. For their family, traditional healers can make an offering to the gods in order to help them feel some psychological benefit from knowing they have done everything they can. Among the worst scenarios, traditional healers can help the family cope with an unnatural death (Hitchcock and Jones 1976).

Regardless of the exact ritual, the traditional healer reenacts a broader cosmology so that the patient interfaces with a spiritual and aesthetic creation of the self to create, sustain, and transmit a system of meanings for inexplicable physical, mental, and social suffering. This interface within a separate metaphorical reality is more locally understood, intimate, malleable, and psychologically penetrating than what conventional spoken word or illness narratives have to offer (Peters 2007; Craig et al. 2010; Sidky 2010). It permits the individual to admit powerlessness to an external locus of control, remove agency from the self, engage in intersubjective dynamics (Desjarlais 1992), bypass local notions of stigma (Messerschmidt 1976; Kohrt and Harper 2008), and perhaps even activate fundamental brain (neurognostic) structures responsible for therapeutic behavioral and cognitive healing (Sidky 2008). Through symbolic narration, the individual eventually depersonalizes, defuses, reinterprets, and unburdens unfortunate, baffling, and frightening events while reintegrating their mental distress within a particularization of a more meaningful mythic world (Desjarlais 1992; Sidky 2010). This creates a satisfying explanation that is internally consistent with traditional Nepali beliefs and meets the underlying security and existential needs within the patient, curer, and community (Hitchcock and Jones 1976; Reinhard 1976; Craig et al. 2010).

On a simpler level, the traditional healer can act as a therapeutic ally when providing personal support, empathy, and higher expectations of treatment (Hitchcock and Jones 1976). This invokes a placebo-like response that can aid

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depression, anxiety, insomnia, and sometimes even schizophrenia (Nicoletti 2006; Sidky 2010). Traditional healers are particularly adept at eliciting empathy because often they are community neighbors who can naturally establish personal relationships and familiarize themselves with longstanding family history (Sidky 2008). The traditional healer's familiar role in Nepali society allows them to embody psychological attributes, expand their capacity for empathy, and express more sensitivity to their patient's needs (Hitchcock and Jones 1976). When compared to medical providers, traditional healers appear more familiar, less frightening, and less intrusive (Maskarinec 1995).

The traditional healer's familiarity is further fueled by their historical role as doctor or priest in remote Nepali communities during which medical and religious specialties were not differentiated (S. K. Jones 1976). However, unlike conventional priests or doctors who acquire roles through social inheritance, succession, or biomedical training, traditional healers acquire supernatural strength through spiritual inheritance, possession, divine intervention, and magician-religious training whether alone or under a guru. For instance, *jhankri* (traditional healers from Eastern Nepal) carry a certain power and status regardless of their being possessed by a divine entities. *Dhami* (western traditional healers) are primarily mediums who have no power in themselves, making *dhami* simple people like any other. To heal, a deity possesses and performs the act through the *dhami* (Hitchcock 1976). With this perceived power, traditional healers, whether *dhami*, *jhankri*, or otherwise, possess the capacity to insert their treatments into the patient's private and public selves because they too had to undergo a public and private initiatory transformation (Hitchcock 1976; Maskarinec 1995).

The traditional healer's ability to raise expectations stems from how they are viewed by Nepali society. When strictly viewed within the scientific plane, researchers may overlook the traditional healer's culturally perceived role as the guardian of an individual's psychic equilibrium and the active mediator between the human and spiritual realms (Nicoletti 2006; Sidky 2008). In fact, the traditional healer, through their spiritual role, can create religious explanatory frameworks to treat an individual's psychological and sociological existential crises (Macdonald 1976; Craig et al. 2010), and it is within this psychosociological foundation that the traditional healer manipulates unconscious symbols of the body and self as a kind of culturally relevant psychotherapy.

In tandem with the traditional healer's spiritual and psychological benefit, the traditional healer may mobilize social support directly or indirectly. For instance, with the reintegration of child soldiers from the Maoist insurgency certain traditional healer rituals directly facilitate a patient's restoration back to an original role or transformation to a new one during a liminal state, or a state between two social roles. Unfortunately, these social rituals may also lead to the loss of opportunities during the possible transition to a more submissive role, for instance when girl soldiers must return to a patriarchal society (Kohrt 2014).

The traditional healer can indirectly mobilize social support as the family rallies together behind a patient whose magico-religious explanation for illness exonerates them from more stigmatizing mental illness. Social support and magico-religious involvement may even allow for material rewards, relief from unpleasant work

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responsibilities, reduced conflict from the authority over them, and upward mobility in status (S. K. Jones 1976; Skultans 1988). Social support helps to bind the patient and their family more closely together and provide attention, a sense of inclusion, and a feeling of comfort. Magico-religious illness states and traditional healer rituals can also offer a safe space in which the patient can express their pain, personal and social conflict, distress, anger, social problems, and sometimes actual mental illness without directly attacking their oppressors. In this way, traditional healers help patients grasp a profoundly complex life situation by expressing aspects of themselves previously unexpressed (Peters 2004; van Leeuwen 2008; Sapkota et al. 2014). Hence, traditional healers are thought to be particularly effective for psychosomatic illnesses and disenfranchised populations such as marginalized or unmarried women with a lower position in society and very little chance of advancing their status (Peters 2007; Sidky 2008; Hyam 2019).

Because the patient may perceive physical relief during the process of the traditional healer's treatment, they may in turn develop more capacity to tackle other underlying sociological issues. This explanation flows with the Nepali belief that mental distress is an everyday occurrence which must be dealt with individually (Chase and Sapkota 2017) and may explain why patients tend to attribute mental relief following a traditional healer's intervention to an incidental benefit following physical relief (Alter 2014).

The traditional healer may also induce a patient altered state of consciousness through the healer's own learned dissociative experiences. Recent interpretation has viewed altered states of consciousness less as abnormal but more as an alteration of normal human consciousness through special psychophysiological states (Sidky 2008). Other interpretations view altered states of consciousness as a Jungian transcendent function in which mystical experiences turn existential crisis into a transformational growth experience. In this shared state, the traditional healer can provide a sense of understanding as well as an institutionalized framework for proper expression of patient mental processes which have been compartmentalized and integrated into phenomena such as spirit possession (Sidky 2008).

However, critics have expressed skepticism about the degree to which the traditional healer's intervention registers on a conscious level. Any speech during performances tends to be beyond the literal comprehension of both the traditional healer and patient (Maskarinec 1995). Many patients or traditional healers are unable to decipher the traditional healer's rhetoric which often is in a specialized and ambiguous vocabulary that is too idiosyncratic, non-indigenous, and specialized, or archaic. Furthermore, patients can face difficulty when parsing the traditional healer's rhetoric given the acoustics and noise levels of the room (Winkler 1976; Brown 1988). The traditional healer's performance may also be of questionable psychotherapeutic benefit in the setting of infants, the demented, the very sick, and animals (e.g., cows or yaks) (Paul 1976).

On the whole, much of the reviewed literature primarily suggested that traditional healers most effectively treat mental well-being in the case of less severe pathology. In this light, others have theorized that patients perceive positive benefit from their treatment because of the patient's underlying cyclically resolving disease state. Conversely, severe, intractable, and less cyclical illnesses such as schizophrenia and

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obsessive–compulsive disorder have a harder time being treated through expectation, belief, and meaning-making. In other words, it would be expected for there to be gradual improvement regardless of the diagnosis or treatment (Sidky 2008). Put together, given the subjective nature of symptom resolution, outcomes should be open to interpretation (Kohrt and Schreiber 1999).

Discussion

Our scoping review yielded 86 studies on the relationship between the interventions of Nepali traditional healers and mental well-being, 65 of which were qualitative in study design. The reviewed literature covered a wide range of diagnostic and treatment strategies including divination, pulse checks, recitals, offerings, spoken and non-spoken rituals, and altered states of consciousness. The traditional healer's interventional approach may not deeply depend on the exact technique. Rather, patients focus on whether the outcome relates to magico-religious and locally relevant symbols such as spirits, gods, spells, astrology, and karma. Traditional healers can craft these magico-religious constructs into digestible illness narratives, offer empathy, raise expectations, and mobilize the patient's family and community to provide personal and social support, induce altered states of consciousness to facilitate catharsis, and/or shepherd the patient through an unpleasant time until spontaneous recovery from cyclical disease processes.

While the literature suggests that Nepali traditional healers share elements with Western psychotherapy, that is not to say that they are psychotherapists. In addition to or in place of conventional psychotherapy, traditional healers act like flexible social actors and leaders who transform into magico-religious leaders that narrate and act out meaningful, affective, and therapeutic mythological stories within the context of local cosmological beliefs. The traditional healer as social actor and leader can even involve the patient's family and community to collaborate with the patient, elaborate upon the traditional healer's diagnosis, and restore family structure, community identity, and social cohesion.

The traditional healer fuels the patient's superstition about why things happen or did not happen through an intuitive misunderstanding of cause-and-effect relationships. The treatment process relates back to the patient's issues and ailments and gives the impression that traditional healers can influence otherwise unpredictable and significant events without relying on the seemingly unnatural constructs of psychological insight and standard psychotherapeutic verbalization (Singh 2018). In the face of misfortune and confusion, patients generate meaning, restructure their cognition, and freely express themselves.

Overall, the traditional healer's unconventional approach to healing the mind, body, and spirit raises the question of whether biomedicine will ever fully unravel the mechanisms of traditional healing. Nonetheless, the contrasting nature between traditional healers and conventional psychotherapy, specifically the spiritual dimension in which the former operates but the latter does not, can at least partially explain why remote patients prefer traditional healers over medical

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providers, even when doing so paradoxically can come at a greater financial cost (Regmi 1987).

Thus far, the Nepali-based discussion on non-spoken rituals, altered states of consciousness, and several mechanistic theories of traditional healing bears striking resemblance to the broader cross-cultural work from which we based our scoping review (Winkelman 2004, 2010; Nortje et al. 2016; van der Watt et al. 2018). Namely, Nepali traditional healers share with non-Nepali traditional healers the general techniques of hypnotic drumming, dissociative states, and physical exertion in the setting of, but not expressly for, mental distress. Furthermore, scholars have theorized mechanisms of healing within Nepal also described in other traditional healing cultures. These include meaning-making, enhanced community cohesion, and spontaneous recovery because of the natural course of chronic remitting illnesses like bipolar disorder or pain.

Current Findings and Potential Gaps in Knowledge

We devised an overall pathways to care model to better visualize the connections among our synthesized findings and to highlight themes about the relationship between traditional healers and mental well-being that may be present but are scarcely covered by the current literature (Fig. 2). Our model is adapted from prior work by Pham et al. (2020) who themselves adopted a mechanisms of action approach to breaking down a specific psychosocial intervention into its specific and non-specific ingredients/processes (Alavi and Sanderson 2015).

For our model, we fit our results within the broader cultural literature on culture and mental well-being in Nepal and highlighted relative gaps in knowledge (Chase and Sapkota 2017; Nortje et al. 2016; van der Watt et al. 2018). We also offer a written description of our model below. However, we must again emphasize the overall heterogeneity within Nepal's cultural makeup. Therefore, while our pathways to care model captures a broad snapshot of the academic community's current knowledge state, it does so by sacrificing the nuanced values inherent within each of Nepal's cultural systems.

Access to Care

The origins of Nepali mental distress may fall under biological, psychological, sociological, and/or spiritual categories. Given the cultural dimensions of mental health stigma, medical illiteracy, and sociological oppression, patients may self-interpret their underlying psychological and sociological distress into a culturally appropriate care-seeking behavior. For instance, patients may interpret their mental distress as a less stigmatized biological or magico-religious complaint. Patients will then present either to the biomedical treatment realm (e.g., doctors), the magico-religious treatment realm (e.g., traditional healers), or both depending on the context of their environment and illness. *Few studies have investigated the specific social and economic barriers which influence the self-interpretation from a primary psychological or social issue to a medical or spiritual one. Of interest may be the*

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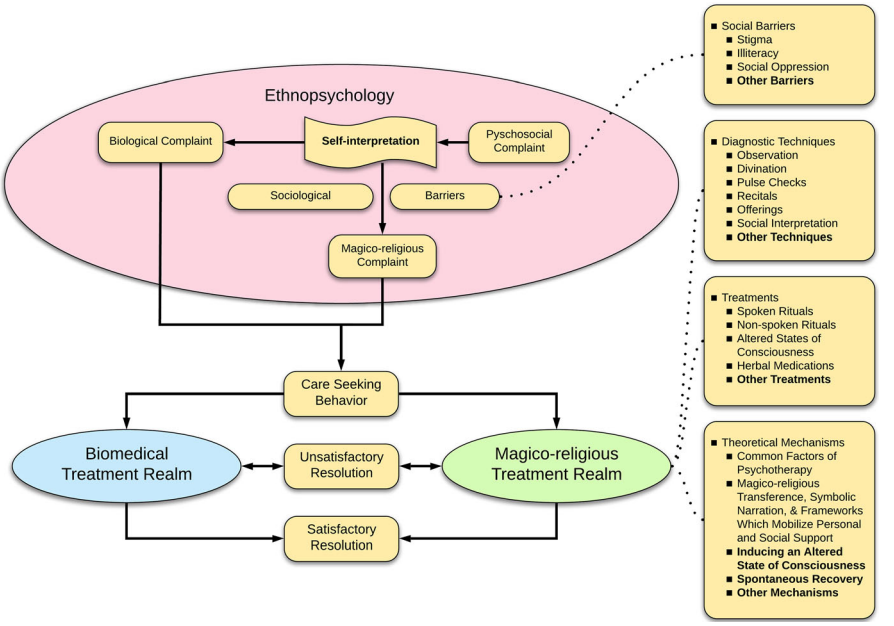

Fig. 2 A pathway to care model highlighting current findings and gaps in knowledge

precise process of self-interpretation from stigmatized to less stigmatized complaints and other magico-religious complaints not yet biomedically studied.

Interventions

Magico-religious diagnostic techniques include divination, pulse checks, recitals, offerings, and social interpretation. Common treatments include non-spoken rituals, spoken rituals, and altered states of consciousness. *Relationships may exist between a patient's specific care seeking behavior and the traditional healer's chosen intervention. Furthermore, relative to Nepal's deep cultural diversity, the scarce available research hints at other diagnostic techniques and treatments not yet biomedically studied.*

Theoretical Mechanisms of Healing

Traditional healers elicit subjective improvement spiritually through symbolic narration, psychologically through personal support, and socially through mobilizing family and community. They can also induce an altered state of consciousness or more simply facilitate spontaneous recovery. *Relationships may exist between a traditional healer's specific intervention and the patient's mechanism of healing. Insufficient research has formally investigated the mechanisms of magico-religious healing, especially with the help of locally validated interview structures, objective rating scales, neuroimaging approaches, and/or other psychophysiological*

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measurements of bodily states, thus hinting at other phenomenological processes not yet biomedically studied.

Resolution of Suffering

A patient may perceive a satisfactory resolution of suffering after their first visit to either the medical provider or the traditional healer. On the other hand, a patient may perceive an unsatisfactory resolution if they receive an intervention that lacks the biomedical or magico-religious background which they inherently desire. *Scarce research has investigated the outcomes of magico-religious healing, thus hinting at relationships between a patient's specific mechanism of healing and their satisfaction level.*

Given the number of exceptions which exist for a culturally diverse country such as Nepal, researchers should avoid making pan generalizations about cultural tenets and by extension magico-religious ideologies from our paper (Tol et al. 2005; Cassaniti and Luhrmann 2014). Such over simplifications may inadvertently exotify folk theories of illness from the possible underlying psychological and physical processes. Furthermore, personal testimonials regarding traditional healers and mental health cannot be taken literally, and many published anthropologists have viewed their own findings with some level of skepticism (Kohrt and Schreiber 1999; Krippner and Combs 2002; Castillo 2004; Sidky 2010).

Limitations

Given the diverse Nepali population, the available literature did not cover every region nor every culture, particularly those less accessible to prior researchers. For instance, healers from the northern mountainous margins of Nepal went underrepresented likely because of our search strategy and/or inclusion/exclusion criteria. The unequal geographic distribution of our included studies may also reflect how the late 1990s to early 2000s Maoist Insurgency limited where researchers could safely travel, especially in certain rural areas. By focusing on the therapeutic aspects of patient–healer interactions and their associated psychological outcomes, we also neglected more formalized practitioners whose work may confer ritualistic healing on a more subtle level. The reviewed literature relied heavily on western diagnostics which poorly distinguish subtly dissimilar states such as dissociative trance and primary thought disorders. The reviewed literature also infrequently focused on the negative aspects of spiritual healing, possibly due to publication bias, retrospective bias, participant bias to please the researchers, or observer bias—all biases inherent from a predominantly ethnographic research base.

The available literature used inconsistent terminology, especially in regard to traditional healers and mental health, most likely to avoid relying on psychiatric terminology which would have missed out on nuanced Nepali phenomenological states. As a result, our systematic search had limited utility even when broadened to a scoping review, and we undoubtedly did not exhaust the full scope of the relevant literature. Furthermore, we relied on papers written primarily by Western authors

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making the scoping review itself susceptible to western bias. This is made additionally problematic in light of the Nepali preference to report physical complaints over mental which consequently blurs the line among physical illness, somatic complaints, and "true" psychiatric disease.

Future Research Recommendations

Further literature review could expand this scoping review and that of Chase et al.'s (2018) into the realm of more formalized traditional practitioners such as Ayurvedic, Tibetan, and/or Chinese medicine practitioners whose alternative techniques and interactions may confer psychological benefit with or without the ritualistic interactions emphasized in this review. As this scoping review focused on diagnostic approaches, treatments, and theoretical mechanisms of healing, and Chase et al. (2018) on culture, other reviews could focus on different aspects of patient–healer pathways to care including epidemiological and economic patient–healer data, traditional healer demographics, perceptions of traditional healers, barriers to care, chief complaints, "idioms of distress," duration and frequency of traditional healer encounters, etc. Additional review of the Nepali written literature would reveal insights previously hidden from English-locked reviews such as ours.

Research teams who work across the boundaries of culture, medicine, and psychiatry should, as Höfer (1992) once suggested, frame the broader therapeutic strategies of ritual and its continued gaps in knowledge through systematic, empirically sound, though still culturally adapted, methods including locally validated psychological tests, medical examinations and the like (Höfer 1992). To date, there are few studies which have taken a systematic, objective approach to examining the relationship between traditional healers and mental health in Nepal, e.g., interventional clinical studies, double blinding of traditional and biomedical treatment, control arms to adjust for confounding factors.

Consider the traditional healers from Kalabo, Zambia who have suggested additional utility from traditional healer services in hospital settings, an option not unlike the priest–physician relationship within US hospitals (Stekelenburg et al. 2005). If future research reveals similar desires among Nepali healer-goers then one research design could evaluate the efficacy of in-hospital traditional healer consultations. Alternatively, one could apply this approach within the outpatient setting with medical providers instead permitting or not permitting the patient to enlist outside, parallel traditional healer treatment. Established researchers could utilize implementation science research methods, e.g., the Consolidated Framework for Implementation Research, to study how collaboration succeeds or fails based on programmatic, contextual, provider, and client-level factors.

For epidemiological and economic data surrounding traditional healer utilization, the research team could draft, pilot, and deliver a structured survey instrument based upon prior studies. Because traditional healers may treat mental distress secondary to patient reported physical or supernatural injury, researchers ought to caution themselves against surveys which exclusively measure mental illness using conventional psychological terminology.

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One area of interest has been the objective measurement of symptom resolution through neuroimaging and other psychophysiological measurements of bodily states (Seligman 2018). Prior cross-cultural work by Winkelman (2004, 2010) proposed a neurotheological explanation in which healer induced feelings of self-confidence, authority, belief and expectation intensify connections between the limbic system and lower brain structures. Here, increased activation discharges synchronous slow (theta) waves into the frontal brain supposedly creating an integrative mode of consciousness. His theories elegantly connect the general human psychophysiological tendency to the emotional, cognitive, and psychoneuroimmunlogical responses (Winkelman 2004, 2010). However, recent neuroimaging, brain biology, and chemistry studies have criticized his theories for lacking empirical justification and compatibility with modern findings (Sidky 2008).

Other innovative and scientifically sound neuroimaging studies on consciousness, while faintly related to traditional healer and patient altered states of consciousness, may also inform future neurobiological work on healers and mental-well-being in Nepal (Lutz et al. 2007, 2008a, b; Marcia 2003; Perlman et al. 2010; Acunzo et al. 2013; Seppälä et al. 2014; Dahl et al. 2015). Richard Davidson has arguably pioneered this field by applying functional magnetic resonance imaging to extensively study the mechanisms of brain function and new therapeutic approaches for psychology. For instance, his findings have demonstrated how mental training and meditation can increase the strength of activation in the left prefrontal cortex, which houses positive emotions, while dampening the right prefrontal cortex, which houses negative emotions. His other studies have found similar neurocorrelates between mental training and mediation and the insula, amygdala, right temporo-parietal junction, right posterior superior temporal sulcus, limbic circuitry, and immune system (Davidson and Goleman 1977; Davidson et al. 2003; Davidson and Lutz 2008).

However, such "gold standard" measures, though critical in their own right, may, alone, fail to enlist participants who live far away from clinical settings or worse, test the ethnical limits of consent and blinded treatment among vulnerable patient populations. Furthermore, though traditional healers are finding themselves interacting more and more with biomedical professionals, research data from idealistic, controlled clinical settings provide limited utility for the rural and migratory residents who traditional healers primarily tend to. Instead, the Community-Based Participatory Research model would better capture the rural pathways to care which extend across formal and informal health system actors (Wilson et al. 2018).

As an example, researchers could explore the intertwined lives of traditional healers and medical providers as they treat shared patients in search of a holistic sense of relief. As the patient traverses their personalized care network, researchers could cross-culturally compare seemingly disparate explanatory models, diagnoses, and treatments. And rather than focusing entirely on biomedical definitions of symptoms, interventions, and outcomes, researchers could follow local conceptions of self, e.g., *man* (heart-mind), *dimaag* (brain), distress, e.g., fallen *saya* (soul), and traditional healers, e.g., *amchi*, as defined and volunteered by the patients, traditional healers, and perhaps even medical providers themselves. Local

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Table 3 Ideas for future research

Domain	Potential gaps
Study design	Systematic/scoping review of epidemiological and economic patient–healer data, formalized traditional healers, healer-related pathways to care, healer-related psychological outcomes, and Nepali written literature
	Community Field-based Research (CFBR)
	Technological avenues for research communication across parallel study groups
	Interventional clinical trials research
	Consolidated Framework for Implementation Research (CFIR)
Structured instruments	Medical examinations and psychometrics
	Standardized qualitative research tools to elicit illness narratives
	Objective rating scales to measure traditional healer interventions and magico-religious and psychiatric phenomena
	Neurodiagnostic approaches to measure biological underpinnings
Access to care	Specific contexts which influence access to care
	Social and economic barriers
	Common patterns of self-interpretation
	Idioms of distress not yet biomedically studied
	Solutions to overcoming barriers
	Solutions to better match care seeking behavior to the appropriate intervention
Interventions	Interventions not yet biomedically studied
	Relationships which link specific patient care-seeking behaviors to traditional healer interventions
Theoretical mechanisms of healing	Mechanisms of healing not yet biomedically theorized
	Relationships which link specific traditional healer interventions to the patient's mechanism of healing
	Other common factors in psychotherapy underlying magico-religious healing besides empathy and raised expectations
	The comparison between traditional healers and other evidence-based providers with respect to common factors in psychotherapy
	Solutions for evidence-based providers to better interface with the factors of psychotherapy specific to traditional healers
Outcomes	Outcomes of magico-religious healing
	How patients seek treatment if they encounter an unsatisfactory resolution
	Relationships which link specific patient mechanisms of healing to their perceived level of satisfaction

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traditional healers might even assist the research team with negotiating and translating local disease causality models, notions of truth, relevant scientific concepts, and research priorities not shared across all cultures (Adams et al. 2005; Adams et al. 2008; Shrestha and Lediard 1980). Research teams could take a conventional field-based approach or even explore new technological avenues for communication, documentation, and analysis of complex, parallel study groups (Bhatta et al. 2015; Chib et al. 2015; Style et al. 2017; Ni et al. 2020).

However, researchers should balance the naturalistic approach of Community-Based Research Participation with one or several structured and locally validated instruments. For instance, Craig et al. (2010) applied an adaptation of the McGill Illness Narrative Interview (MINI) to systematically study illness narratives and explanatory frameworks among patients in Mustang, many of whom sought treatment from local traditional healers. Alternatively, Kohrt et al. (2020) used a locally validated, structured observational rating scale, titled Enhancing Assessment of Common Therapeutic factors (ENACT), to measure the psychotherapeutic factors in common between traditional healers and conventional psychotherapists within the Central Middle Hills of Nepal. Yet, blind adoption of structured questionnaires, interview formats, and biomedical diagnostics could also hamper rather than facilitate meaningful data collection. For instance, van Ommeren et al. (2000) argued that the Composite International Diagnostic Interview (CIDI), which assesses psychiatric somatic complaints, focuses too heavily on (1) the biomedical framework and (2) the assumption that all medical providers deliver diagnoses to their patients, thus confounding its cultural validity in Nepal. In other examples, questions from the locally validated Barriers to Access Care Evaluation (BACE) scale (Clement et al. 2012), applied by Kohrt et al. (2018) to assess stigma reduction among mental healthcare providers, and even the aforementioned McGill Illness Narrative Interview can prove restricting and at times misleading when measuring tacit community biases surrounding indigenous belief models (Pham et al. 2020) or blurred distinctions between the self and other, religion and medicine, etc. (Craig et al. 2010; Kohrt et al. 2018).

We now summarize the aforementioned ideas for future research (see Table 3).

Conclusion

In Nepal, traditional healers' perceived impact appears greatest for mild to moderate forms of psychological distress. However, the methodological and sample heterogeneity preclude uniform conclusions about traditional healing with Nepal, or more broadly in global appraisals of traditional healing. Further research should employ methods which are both empirically sound and culturally adapted to explore the role of traditional healers in mental health. Ultimately, by completing the picture on traditional healers and mental well-being, social scientists, clinicians, and public health practitioners can better understand how and for whom traditional healing impacts distress. The work is also useful to uncover the diverse conceptions of self and how these models shape healing. Medical providers, researchers, and public officials can create a collaborative, integrative, and interdisciplinary approach to

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offer better wrap around care in a country with serious ongoing mental healthcare disparities. Globally, researchers can apply similar approaches to determine how traditional healers uniquely respond to the non-pharmacological and therapeutic needs of developing countries without resorting to overly prescriptive and medically imperialistic treatment models.

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Compliance with Ethical Standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

Acharya, S.
2019 Spiritual Possession and the Role of Traditional Healers in Nepal. Journal of Nepal Health Research Council 17(1):131–132.

Acunzo, D.J., R. Evrard, and T. Rabeyron
2013 Anomalous Experiences, Psi and Functional Neuroimaging. Front Human Neuroscience 7:893.

Adams, Vincanne, S. Miller, S. Craig, A. Samen, Sonam Nyima, Lhakpen Droyoung, and M. Varner
2005 The Challenge of Cross-Cultural Clinical Trials Research: Case Report from the Tibetan Autonomous Region, People's Republic of China. Medical Anthropology Quarterly 19(3):267–289.

Adams, V., S. Miller, S. Craig, Nyima Droyoung Sonam, P. Le, and M. Varner
2008 Informed Consent in Cross-Cultural Perspective: Clinical Research in the Tibetan Autonomous Region, PRC. Culture, Medicine and Psychiatry 31(January):445–472.

Alavi, S.B., and W.C. Sanderson
2015 Mechanisms of Action in Psychotherapy. *In* The Encyclopedia of Clinical Psychology. Robin L. Cautin and Scott O. Lilienfeld, eds. New York: Wiley Inc.

Alter, J.S.
2014 Spirits and Exorcism: On the Semiotics of Healing and Recovery. Ethos 42(4):399–414.

Arksey, H., and L. O'Malley
2005 Scoping Studies: Towards a Methodological Framework. International Journal of Social Research Methodology 8(1):19–32.

Bajaj, B.K., S. Chaudhary, and R. Shrestha
2013 Etiological Beliefs of Patients with Neurological Disorders Attending a Tertiary Care Center: A Cross-Sectional Study. Journal of Neurosciences in Rural Practice 4(4):383–386.

Bhatta, R., K. Aryal, and G. Ellingsen
2015 Opportunities and Challenges of a Rural-telemedicine Program in Nepal. Journal of Nepal Health Research Council 13(30):149–153.

Braun, V., and V. Clarke
2006 Using Thematic Analysis in Psychology. Qualitative Research in Psychology 3(2):77–101.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
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MS Code : MEDI-D-19-00146R1 | CP | DISK

Brenman, N.F., N.P. Luitel, S. Mall, and M.J.D. Jordans
2014 Demand and Access to Mental Health Services: A Qualitative Formative Study in Nepal. BMC International Health and Human Rights 14:1.
Burghart, R.
1984 The Tīsīyāhī Klinīk: A Nepalese Medical Centre in an Intracultural Field of Relations. Social Science and Medicine 18(7):589–598.
Busick, C.
1978. Anthropological Approaches to the Study of Nepali Shamanism. Master's Thesis. Michigan: Western Michigan University.
Brown, M.F.
1988 Shamanism and Its Discontents. Medical Anthropology Quarterly 2(2):102–120.
Cassaniti, J.L., and T.M. Luhrmann
2014 The Cultural Kindling of Spiritual Experiences. Current Anthropology 55(S10):S333–S343.
Castillo, R.J.
2004 Review of Shamanism. The Neural Ecology of Consciousness and Healing, by Michael Winkelman. Journal of Ritual Studies 18(1):101–104.
Chase, L., and R.P. Sapkota
2017 'In Our Community, a Friend Is a Psychologist': An Ethnographic Study of Informal Care in Two Bhutanese Refugee Communities. Transcultural Psychiatry 54(3):400–422.
Chase, L., R.P. Sapkota, D. Crafa, and L.J. Kirmayer
2018 Culture and Mental Health in Nepal: An Interdisciplinary Scoping Review. Global Mental Health 5:e36.
Chib, A., M.H. van Velthoven, and J. Car
2015 mHealth Adoption in Low-Resource Environments: a Review of the Use of Mobile Healthcare in Developing Countries. Journal of Health Communnication 20(1):4–34.
Clarke, K., N. Saville, B. Bhandari, K. Giri, M. Ghising, M. Jha, S. Jha, J. Magar, R. Roy, B. Shrestha, B. Thakur, R. Tiwari, A. Costello, D. Manandhar, M. King, D. Osrin, and A. Prost
2014 Understanding Psychological Distress among Mothers in Rural Nepal: A Qualitative Grounded Theory Exploration. BMC Psychiatry 14(March):60.
Clement, S., E. Brohan, D. Jeffery, C. Henderson, S.L. Hatch, and G. Thornicroft
2012 Development and Psychometric Properties the Barriers to Access to Care Evaluation Scale (BACE) Related to People with Mental Ill Health. BMC Psychiatry 12:36.
Craig, S.R., L. Chase, and T.N. Lama
2010 Taking the MINI to Mustang, Nepal: Methodological and Epistemological Translations of an Illness Narrative Interview Tool. Anthropology and Medicine 17(1):1–26.
Dahal, D.R.
2003 Social composition of the population: caste/ethnicity and religion in Nepal. Population Monograph of Nepal 1:87–135.
Dahl, C.J., A. Lutz, and R.J. Davidson
2015 Reconstructing and deconstructing the self: cognitive mechanisms in meditation practice. Trends in Cognitive Sciences 19(9):515–523.
Davidson, R.J., and D.J. Goleman
1977 The role of attention in meditation and hypnosis: a psychobiological perspective on transformations of consciousness. International Journal of Clinical Hypnosis 25(4):291–308.
Davidson, R.J., J. Kabat-Zinn, J. Schumacher, M. Rosenkranz, D. Muller, S.F. Santorelli, F. Urbanowski, A. Harrington, K. Bonus, and J.F. Sheridan
2003 Alterations in brain and immune function produced by mindfulness meditation. Psychosomatic Medicine 65(4):564–570.
Davidson, R.J., and A. Lutz
2008 Buddha's Brain: Neuroplasticity and Meditation. IEEE Signal Process Magazine 25(1):176–274.
Desjarlais, R.R.
1991 Dreams, Divination, and Yolmo Ways of Knowing. Dreaming 1(3):211–224.
1992 Body and Emotion: the Aesthetics of Illness and Healing in the Nepal Himalayas. Philadelphia, PA: University of Pennsylvania Press.
2003 Sensory Biographies: Lives and Deaths Among Nepal's Yolmo Buddhists. Berkeley: University of California Press.
Dickinson, J.G.
1988 Spirit Possession in Nepal. Journal of the Royal Army Medical Corps 134(2):103.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | LE | TYPESET
MS Code : MEDI-D-19-00146R1 | CP | DISK

Egli, W.M.
2014 The Sunuwar of Nepal and Their Sense of Communication: a Study in the Culture, Psychology and Shamanism of a Himalayan People. Asien: LIT Studies on Asia.
Evers, S., M. van der Brug, F. van Wesel, and L. Krabbendam
2016 Mending the Levee: How Supernaturally Anchored Conceptions of the Person Impact on Trauma Perception and Healing among Children (Cases from Madagascar and Nepal). Children and Society 30(6):423–433.
Fournier, A.
1976 A Preliminary Report on the Puimbo and the Ngiarni: The Sunuwar Shamans of Sabra. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and R.L. Jones, eds., pp. 100–123. Warminster, England: Aris and Phillips.
Furr, A.L.
2004 Medicalization in Nepal: A Study of the Influence of Westernization on Defining Deviant and Illness Behavior in a Developing Country. International Journal of Comparative Sociology 45(1–2):131–142.
Gaborieau, M.
1976 Preliminary Report on the God Masta. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 217–243. Warminster, England: Aris and Phillips.
Gaenszle, M.
2016 Meaning, Intention, and Responsibility in Rai Divinatory Discourse. Oral Tradition 30(2):1034–1043.
Gellner, D.N.
1994 Priests, Healers, Mediums and Witches: The Context of Possession in the Kathmandu Valley, Nepal. Man 29(1):27–48.
Gewali, M.B.
2008 Aspects of Traditional Medicine in Nepal. Toyama, Japan: Institute of Natural Medicine.
Ghimire, P.D.
2019 Multicultural Country Nepal. Lanna Journal of Buddhist Studies and Cultures 1:1.
Greene, P.D.
2002 Sounding the Body in Buddhist Nepal: Neku Horns, Himalayan Shamanism, and the Transmigration of the Disembodied Spirit. The World of Music 44(2):93–114.
Hardman, C.
1996 Vitality and Depression: the Concept of Saya as an Institution in East Nepal. Religion 26(1):1–14. https://doi.org/10.1006/reli.1996.0001.
2004 Emotions and Ancestors: Understanding Experiences of Lohorung Rai in Nepal. *In* Religion and Emotion: Approaches and Interpretations. John Corrigan and John Corrigan, eds., pp. 327–349. New York: Oxford University Press.
Harper, Ian
2014 Development and Public Health in the Himalaya: Reflections on Healing in Contemporary Nepal. 1st Edition. London: Routledge.
Hashimoto, N., D. Fujisawa, N.A. Giasuddin, B.K. Kenchaiah, A. Narmandakh, K. Dugerragchaa, S.M. Tamrakar, S.R. Adhikari, and N. Sartorius
2015 Pathways to Mental Health Care in Bangladesh, India, Japan, Mongolia, and Nepal. Asia-Pacific Journal of Public Health 27(2):1847–1857.
Hitchcock, J.T.
1973 A Shaman's Song and Some Implications for Himalayan Research. *In* Contributions to the Anthropology of Nepal. Christoph Furer-Haimendorf, ed., pp. 150–158. Oxford: Aris and Phillips Ltd..
1976 Aspects of Bhujel Shamanism. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock, ed., pp. 165–196. Warminister, Wiltshire: Aris and Phillips.
Hitchcock, J.T., and R.L. Jones
1976 Spirit Possession in the Nepal Himalayas. Warminister, Wiltshire: Aris and Phillips.
Höfer, A.
1981 Tamang Ritual Texts I: Preliminary Studies in the Folk-Religion of an Ethnic Minority in Nepal. Baden-Baden: Nomos Verlagsgesellschaft.
1992 On the Poetics of Healing in Tamang Shamanism. *In* Aspects of Nepalese Traditions. Bernhard Kölver, ed., pp. 155–170. Stuttgart: Franz Steiner Verlag.
1994 A Recitation of the Tamang Shaman in Nepal. Bonn: VGH Wissenschaftsverlag.
1997 Tamang Ritual Texts: II. Ethnographic Studies in the Oral Tradition and Folk-Religion of an Ethnic Minority in Nepal Wiesbaden: Franz Steiner Verlag.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | LE | TYPESET
MS Code : MEDI-D-19-00146R1 | CP | DISK

Höfer, A., and B.P. Shrestha
1973 Ghost Exorcism Among the Brahmans of Central Nepal. Central Asiatic Journal 17(1):51–77.
Holmberg, D.H.
1989 Order in Paradox: Myth, Ritual, and Exchange Among Nepal's Tamang. Ithaca: Cornell University Press.
Hyam, J.
2019. The Transformational Body: Bāul and Jhākri Approaches to Embodied Healing. Doctorate dissertation. Sydney, Austrailia: The University of Sydney.
Hyman, M.A.
2006 Notes from Nepal: Reflections of a Medical Student on Shamans, Lamas, Serpents, and Fortunes. Alternative Therapies in Health and Medicine 12(6):10–18.
Incayawar, M., R. Wintrob, L. Bouchard, G. Bartocci and World Psychiatric Association
2009 Psychiatrists and Traditional Healers: Unwitting Partners in Global Mental Health. Chichester: Wiley-Blackwell.
Jimba, M., I.W. Aitken, R.C. Silwal, A.K. Poudyal, and S. Wakai
2005 First Aid Kit: A Challenging New Tool for Traditional Healers in Nepal. Tropical Doctor 35(2):113–114.
Jolly, A.
1999 "Indigenous Mental Health Care among Gurkha Soldiers Based in the United Kingdom. Journal of the Royal Army Medical Corps 145(1):15–17.
Jones, R.L.
1976 Spirit Possession and Society in Nepal. *In* Shamanism and Spirit Possession: the Definitional Problem. In Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 1–11. Warminster, England: Aris and Phillips.
Jones, S.L.
1976 Limbu Spirit Possession—a Case Study. *In* Shamanism and Spirit Possession: The Definitional Problem. J.T. Hitchcock and Rex L. Jones, eds., pp. 22–28. Warminster, England: Aris and Phillips.
Katry, P.K.
2011 The Nepalese Traditional Concepts of Illness and Treatment. DADA Rivista Di Antropologia Post-Globale 2011:45–54.
Kisa, R.F., B.R. Kajungu, P.O. Mangen, A.W. Gwaikolo, and J. Cooper
2016 Pathways and Access to Mental Health Care Services by Persons Living with Severe Mental Disorders and Epilepsy in Uganda, Liberia and Nepal: A Qualitative Study. BMC Psychiatry 16:305.
Kohrt, B.A., and S.S. Schreiber
1999 Jhum-Jhum: Neuropsychiatric Symptoms in a Nepali Village. Lancet 353(9158):1070.
Kohrt, B.A., and I. Harper
2008 Navigating Diagnoses: Understanding Mind-Body Relations, Mental Health, and Stigma in Nepal. Culture Medicine and Psychiatry 32(4):462–491.
Kohrt, B.A., and D.J. Hruschka
2010 Nepali Concepts of Psychological Trauma: The Role of Idioms of Distress, Ethnopsychology and Ethnophysiology in Alleviating Suffering and Preventing Stigma. Culture, Medicine and Psychiatry 34(2):322–352.
Kohrt, B. A.
2014. The Role of Traditional Rituals for Reintegration and Psychosocial Well-Being of Child Soldiers in Nepal. Genocide and Mass Violence: Memory, Symptom, and Recovery. https://doi.org/10.1017/cbo9781107706859.022.
Kohrt, B.A., M. Jordans, E.L. Turner, K.J. Sikkema, N.P. Luitel, S. Rai, D.R. Singla, J. Lamichhane, C. Lund, and V. Patel
2018 Reducing Stigma Among Healthcare Providers to Improve Mental Health Services (RESHAPE): Protocol for a Pilot Cluster Randomized Controlled Trial of a Stigma Reduction Intervention for Training Primary Healthcare Workers in Nepal. Pilot and Feasibility Studies 4:36.
Kohrt, B.A., E.L. Turner, S. Rai, A. Bhardwaj, K.J. Sikkema, A. Adelekun, M. Dhakal, N.P. Luitel, C. Lund, V. Patel, and M. Jordans
2020 Reducing Mental Illness Stigma in Healthcare Settings: Proof of Concept for a Social Contact Intervention to Address What Matters Most for Primary Care Providers. Social Science and Medicine 250:112852.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | □ LE | □ TYPESET
MS Code : MEDI-D-19-00146R1 | ☑ CP | ☑ DISK

Krippner, S., and A. Combs
2002 Stanley Krippner and Allan Combs, The Neurophenomenology of Shamanism: An Essay. Journal of Consciousness Studies 9(3):77–82.
Kuruvilla, A., and Jacob, K.S.
2015. Mental Health Resources in South Asia. In *Mental Health in South Asia: Ethics, Resources, Programs and Legislation*, edited by Jitendra Kumar Trivedi, Adarsh Tripathi, Jitendra Kumar Trivedi, Adarsh Tripathi, 2nd Edn, vol. 58, pp. 191–219. New York: Springer.
Lecomte-Tilouine, M.
2009a The Dhuni Jagar: Possession and Kingship in Askot, Kumaon. *In* Bards and Mediums: History, Culture, and Politics in the Central Himalayan Kingdoms. Marie Lecomte-Tilouine, ed. Almora: Almora Book Depot.
2009b The Social Dimension of Himalayan Mediumism. *In* Bards and Mediums: History, Culture, and Politics in the Central Himalayan Kingdoms. Marie Lecomte-Tilouine, ed. Almora: Almora Book Depot.
Levac, D., H. Colquhoun, and K.K. O'Brien
2010 Scoping Studies: Advancing the Methodology. Implementation Science: IS 5(September):69.
Lohani, U.
2010 Man-Animal Relationships in Central Nepal. Journal of Ethnobiology and Ethnomedicine 6(November):31.
Luitel, N.P., M.J.D Jordans, B.A. Kohrt, S.D. Rathod, and I.H. Komproe
2017 Treatment Gap and Barriers for Mental Health Care: A Cross-Sectional Community Survey in Nepal. PLoS ONE 12(8):e0183223.
Lutz, A., J.D. Dunne, and R.J. Davidson
2007 Meditation and the Neuroscience of Consciousness: an Introduction. *In* The Cambridge Handbook of Consciousness. P.D. Zelazo, M. Moscovitch, and E. Thompson, eds., pp. 499–552. Cambridge, England: Cambridge University Press.
Lutz, A., H.A. Slagter, J.D. Dunne, and R.J. Davidson
2008a Attention Regulation and Monitoring in Meditation. Trends in Cognitive Sciences 12(4):163–169.
Lutz, A., J. Brefczynski-Lewis, T. Johnstone, and R.J. Davidson
2008b Regulation of the Neural Circuitry of Emotion by Compassion Meditation: Effects of Meditative Expertise. PLoS ONE 3(3):1897.
Macdonald, A.W.
1976 Preliminary Notes on Some Jhankri of the Muglan. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 309–343. Warminster, England: Aris and Phillips.
Marcia, B.
2003 Studying the well-trained mind: Buddhist monks and Western scientists are comparing notes on how the mind works and collaborating to test insights gleaned from meditation. Science 302(5642):44–47.
Maskarinec, G.G.
1995 The Rulings of the Night: An Ethnography of Nepalese Shaman Oral Texts. Madison, WI: University of Wisconsin Press.
Mastromattei, R.
1995 A Shamanic Séance Conducted by a Woman in Nepal. SHAMAN: An International Journal for Shamanistic Research 3(1):155–164.
Melia, W.M., and J.D. Mumford
1987 Spirit Possession and Bewitchment Presenting as Physical Illness: Report of Four Cases in Nepalese Males. Journal of the Royal Army Medical Corps 133(3):152–154.
Messerschmidt, D.
1976 Ethnographic Observations of Gurung Shamanism in Lamjung District. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 197–216. Warminster, England: Aris and Phillips.
Michl, W.D.
1976 Notes on the Jhakri of Ath Hajar Parbat/Dhaulagiri Himalaya. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 153–164. Warminster, England: Aris and Phillips.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | LE | TYPESET
MS Code : MEDI-D-19-00146R1 | CP | DISK

Miller, C.J.
1979 Faith-Healers in the Himalayas: an Investigation of Traditional Healers and Their Festivals in Dolakha District of Nepal. Kirtipur, Kathmandu: Centre for Nepal and Asian Studies, Tribhuvan University.
Mumford, S.
1989 Himalayan Dialogue: Tibetan Lamas and Gurung Shamans in Nepal. Madison, WI.: University of Wisconsin Press.
National Population and Housing Census
2011 (National Report). 2012. Kathmandu: The Government of Nepal Central Bureau of Statistics.
Ni, Z., N. Atluri, R.J. Shaw, J. Tan, K. Khan, H. Merk, Y. Ge, S. Shrestha, A. Shrestha, L. Vasudevan, B. Karmacharya, and L.L. Yan
2020 Evaluating the Feasibility and Acceptability of a Mobile Health-Based Female Community Health Volunteer Program for Hypertension Control in Rural Nepal: Cross-Sectional Study. JMIR mHealth and uHealth 8(3):e15419.
Nicoletti, M.
2006 Shamanic Solitudes: Ecstasy, Madness and Spirit Possession in the Nepal Himalayas. Kathmandu: Vajra Publications.
Nortje, G., B. Oladeji, O. Gureje, and S. Seedat
2016 Effectiveness of Traditional Healers in Treating Mental Disorders: A Systematic Review. The Lancet Psychiatry 3(2):154–170.
Parish, S.M.
1991 The Sacred Mind: Newar Cultural Representations of Mental Life and the Production of Moral Consciousness. Ethos 19(3):313–351.
Paul, R.
1976 Some Observations of Sherpa Shamanism. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 141–152. Warminster, England: Aris and Phillips.
Perlman, D.M., T.V. Salomons, R.J. Davidson, and A. Lutz
2010 Differential effects on pain intensity and unpleasantness of two meditation practices. Emotion 10(1):65–71.
Peters, L.G.
2004 Trance, Initiation and Psychotherapy in Nepalese Shamanism: Essays on Tamang and Tibetan Shamanism. New Delhi: Nirala Publications.
2007 Tamang Shamans: an Ethnopsychiatric Study of Ecstasy and Healing in Nepal. New Dehli: Nirala.
Pham T. V, Koirala R. Kohrt B. A.
2020. "Satisfaction in the Soul: Common Factors Theory Applied to Traditional Healers in Rural Nepal." *Ethos*. DOI: 10.1111/etho.12263
Pigg, S.L.
1995 The Social Symbolism of Healing in Nepal. Ethnology 34(1):17.
Poudyal, A.K., M. Jimba, B.K. Poudyal, and S. Wakai
2005 Traditional Healers' Roles on Eye Care Services in Nepal. British Journal of Ophthalmology 89(10):1250–1253.
Poudyal, A.K., J. Masamine, M. Izumi, R.C. Silwal, S. Wakai, and Tadatoshi. Kuratsuji
2003 A Traditional Healers' Training Model in Rural Nepal: Strengthening Their Roles in Community Health. Tropical Medicine & International Health 8(10):956–960.
Regmi, M.P.
1987 The Gurung Personality Structure: As Projected through Rituals and Myths. Psychologia: An International Journal of Psychology in the Orient 30(1):53–57.
Reinhard, J.
1976 Shamanism Among the Raji of the Southwest Nepal. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 263–293. Warminster, England: Aris and Phillips.
Riboli, D.
2000 Tunsuriban: Shamanism. *In* The Chepang of Southern and Central Nepal. Philippa. Currie, ed. Kathmandu: Mandala Book Point.
2012 Consciousness and Indigenous Healing Systems: Between Indigenous Perceptions and Neuroscience. pp. 69–86. In Consciousness: Its Nature and Functions.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | LE | TYPESET
MS Code : MEDI-D-19-00146R1 | CP | DISK

Sagant, P.
1976 Becoming a Limbu Priest: Ethnographic Notes. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 56–99. Warminster, England: Aris and Phillips.
Sapkota, R.P., D. Gurung, D. Neupane, S.K. Shah, H. Kienzler, and L.J. Kirmayer
2014 A Village Possessed by 'Witches': A Mixed-Methods Case-Control Study of Possession and Common Mental Disorders in Rural Nepal. Culture, Medicine and Psychiatry 38(4):642–668.
Seligman, R.
2018 'Bio-looping' and the Psychophysiological in Religious Belief and Practice: Mechanisms of Embodiment in Candomblé Trance and Possession. *In* The Palgrave Handbook of Biology and Society. M. Meloni, J. Cromby, and D. Fitzgerald, eds., pp. 417–439. London: Palgrave Macmillan.
Seppälä, E.M., J.B. Nitschke, D.L. Tudorascu, A. Hayes, M.R. Goldstein, D.T. Nguyen, D. Perlman, and R.J. Davidson
2014 Breathing-Based Meditation Decreases Posttraumatic Stress Disorder Symptoms in U.S. Military Veterans: a Randomized Controlled Longitudinal Study. Journal of Traumatic Stress 27(4):397–405.
Shneiderman, S.
2015 Rituals of Ethnicity: Thangmi Identities between Nepal and India. Philadelphia: University of Pennsylvania Press.
Shrestha, R., and M. Lediard
1980 Faith Healers, a Force for Change: Preliminary Report of an Action-Research Project. Kathmandu: UNFPA.
Schünemann, H., J. Brożek, G. Guyatt, and A. Oxman, eds.
2013 GRADE Handbook for Grading Quality of Evidence and Strength of Recommendations. Kathmandu: The GRADE Working Group.
Sidky, H.
2008 Haunted by the Archaic Shaman: Himalayan Jhakris and the Discourse on Shamanism. Lanham, MD: Lexington Books.
2010 Ethnographic Perspectives on Differentiating Shamans from Other Ritual Intercessors. Asian Ethnology 69(2):213–240.
Sidky, H., J. Subedi, R. Spielbauer, James. Hamill, and S. Williams-Blangero
2000 Phombos: a Look at Traditional Healers Among the Jirels of Eastern Nepal. Contributions to Nepalese Studies: The Jirel Issue 7:39–52.
Singh, M.
2018. "Why is there shamanism? Developing the cultural evolutionary theory and addressing alternative accounts." *Behavioral and Brain Sciences* 41.
Skultans, V.
1988 A Comparative Study of the Psychiatric Practice of a Tantrik Healer and a Hospital Out-Patient Clinic in the Kathmandu Valley. Psychological Medicine 18(4):969–981.
Soubrouillard, B.
1995. "A Psychological Study of the Vision and Treatment of Mental Illness by Nepalese Shamans." Unpublished Doctoral Dissertation. Carpinteria: Pacifica Graduate Institute.
Stekelenburg, J., B.E. Jager, P.R. Kolk, E.H. Westen, A. van der Kwaak, and I.N. Wolffers
2005 Health Care Seeking Behaviour and Utilisation of Traditional Healers in Kalabo, Zambia. Health Policy 71(1):67–81.
Style, S., B.J. Beard, H. Harris-Fry, A. Sengupta, S. Jha, B.P. Shrestha, A. Rai, V. Paudel, M. Thondoo, A.M. Pulkki-Brannstrom, J. Skordis-Worrall, D.S. Manandhar, A. Costello, and N.M. Saville
2017 Experiences in running a complex electronic data capture system using mobile phones in a large-scale population trial in southern Nepal. Global Health Action 10(1):1330858.
Subba, S.
2007 Sociocultural Construction of Illness. Kathmandu, Nepal: Ms. Usha Kiran Subba.
Taylor, S.J., and R. Bogdan
1998 Introduction to Qualitative Research Methods: A Guidebook and Resource. 3rd Edition. Hoboken, NJ: Wiley Inc..
Tol, W.A., M.J.D. Jordans, S. Regmi, and B. Sharma
2005 Cultural Challenges to Psychosocial Counselling in Nepal. Transcultural Psychiatry 42(2):317–333.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | LE | TYPESET
MS Code : MEDI-D-19-00146R1 | CP | DISK

Tricco, A.C., E. Lillie, W. Zarin, K.K. O'Brien, H. Colquhoun, D. Levac, D. Moher, M.D.J. Peters, T. Horsley, L. Weeks, S. Hempel, E.A. Akl, C. Chang, J. McGowan, L. Stewart, L. Hartling, A. Aldcroft, M.G. Wilson, C. Garritty, S. Lewin, C.M. Godfrey, M.T. Macdonald, E.V. Langlois, K. Soares-Weiser, J. Moriarty, T. Clifford, Ö. Tunçalp, and S.E. Straus
2018 PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Annals of Internal Medicine 169(7):467–473.

van der Watt, A., T. van de Water, G. Nortje, B.D. Oladeji, S. Seedat, O. Gureje and Partnership for Mental Health Development in Sub-Saharan Africa (PaM-D) Research Team
2018 The Perceived Effectiveness of Traditional and Faith Healing in the Treatment of Mental Illness: A Systematic Review of Qualitative Studies. Social Psychiatry and Psychiatric Epidemiology 53(6):555–566.

van Leeuwen, L.
2008 Everything is Normal: From Supernatural to Psychosocial. Unpublished Master's Thesis. Netherlands: University of Amsterdam.

van Ommeren, M., B. Sharma, R. Makaju, S. Thapa, and J.D. Jong
2000 Limited Cultural Validity of the Composite International Diagnostic Interview's Probe Flow Chart. Transcultural Psychiatry 37(1):119–129.

van Ommeren, M., I. Komproe, E. Cardena, S.B. Thapa, D. Prasain, J.D. Jong, and B. Sharma
2004 Mental Illness among Bhutanese Shamans in Nepal. Journal of Nervous and Mental Disease 192(4):313–317.

Ventevogel, P.
1996. *Whiteman's Things: Training and Detraining Healers in Ghana.* Amsterdam, the Netherlands: Het Spinhuis.

Walter, D.
2001 The Medium of the Message: Shamanism as Localised Practice in the Nepal Himalayas. *In* The Archaeology of Shamanism. Neil S. Price, ed. London: Routledge.

Wilson, E., A. Kenny, and V. Dickson-Swift
2018 Ethical Challenges in Community-Based Participatory Research: A Scoping Review. Qualitative Health Research 28(2):189–199.

Winkler, W.F.
1976 Spirit Possession in Far Western Nepal. *In* Spirit Possession in the Nepal Himalayas. J.T. Hitchcock and Rex L. Jones, eds., pp. 244–262. Warminster, England: Aris and Phillips.

Winkelman, M.
2004. "Shamanism as the Original Neurotheology." Zygon® 39 (1):193-217
2010. *Shamanism: A Biopsychosocial Paradigm of Consciousness and Healing.* Santa Barbara, CA: Praeger.

Journal : Small-ext 11013 | Dispatch : 20-5-2020 | Pages : 44
Article No. : 9676 | □ LE | □ TYPESET
MS Code : MEDI-D-19-00146R1 | ☑ CP | ☑ DISK